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OBLIQUE SHOCK WAVE/TURBULENT BOUNDARY LAYER INTERACTIONS IN THR--ETC(U)

MAR 78 B OSKAM, I E VAS, S M BOGDONOFF

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Part II

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6 OBLIQUE SHOCK WAVE/TURBULENT BOUNDARY  
LAYER INTERACTIONS IN THREE DIMENSIONS  
AT MACH 3.

Part II.

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Final Report for the Period June 1975 - January 1976

10 B. Oskam, I. E. / Vas, S. M. / Bogdanoff

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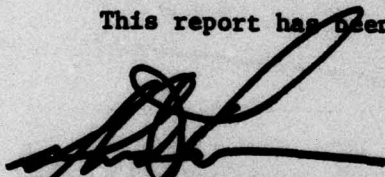


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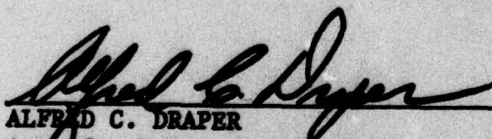
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EXTRACTS IN THREE DIMENSIONS AT EACH 1 -  
WILLIAM SPILLER, THE HONORABLE MEMBER  
June 1915 - January 1916  
Final Report

the three dimensions. In this phase of this work was reported in WHIT-TR-67-10, an interaction between oblique shock waves and turbulent boundary layer.

11-21, February 1957. The present work extends the original region of study of the shallow water circulation area towards the strait's corner between the shore

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# FOREWORD

This document presents detailed tabulations of experimental data obtained in a study on oblique shock wave/turbulent boundary layer interactions in three dimensions. The wind tunnel tests were conducted in the Mach 3 high Reynolds number blowdown boundary layer channel of the Gas Dynamics Laboratory, Princeton University, under Contract F33615-75-C-3126, issued by the Air Force Flight Dynamics Laboratory, Wright-Patterson Air Force Base.

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### Vicinity of the Shock Generator

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# LIST OF SYMBOLS

$\text{ALFA} = \tan^{-1} \left( \frac{v}{u} \right)$	yaw angle of velocity vector (degrees)
ALFA G	effective shock generator angle measured from X-axis (degrees)
$\text{CH} = \frac{\text{QDOT}}{\rho_1 u_1 C_p (\text{TWALL} - \text{TAW})}$	heat transfer coefficient
CHVD	heat transfer coefficient computed from van Driest skin friction correlation
$C_p$	specific heat of air at constant pressure
FIE G	geometrical shock generator angle measured from X-axis (degrees)
FIE S	shock wave angle measured from X-axis (degrees)
$\text{GAMMA} = \tan^{-1} \left( \frac{w}{\sqrt{u^2 + v^2}} \right)$	pitch angle of velocity vector (degrees)
$M_1 = 2.935$	local Mach number in free stream ahead of interaction
NSGA	nominal shock generator angle (degrees)
P	local static pressure (psia)
P1	static pressure upstream of interaction (psia)
P2	static pressure as measured on shock generator (psia)
PSTAG	tunnel stagnation pressure
PT	local pitot pressure
PT1	pitot pressure in free stream ahead of interaction (psia)
QDOT	heat transfer rate at the wall (Btu/ft <sup>2</sup> sec)
$\text{RE inch} = \frac{u_1 \rho_1}{\mu_1}$	Reynolds number per inch
$\text{RE THETA} = \frac{u_1 \rho_1 \text{ THETA}}{\mu_1}$	Reynolds number based on momentum defect thickness
TAW	adiabatic wall temperature (°R)

TGEN	temperature of shock generator ( $^{\circ}\text{R}$ )
THETA	momentum defect thickness of initial boundary layer (inches)
TIME	time elapsed during survey (seconds)
TPROBE	temperature indicated by total temperature probe ( $^{\circ}\text{R}$ )
TSTAG	tunnel stagnation temperature ( $^{\circ}\text{R}$ )
TT	local total temperature ( $^{\circ}\text{R}$ )
TWALL	tunnel wall temperature ( $^{\circ}\text{R}$ )
u,v,w,	velocity components in X, Y and Z direction (ft/sec)
X	coordinate parallel to initial undisturbed free stream; measured from shock generator leading edge, positive downstream (inches)
Y	coordinate normal to X-axis in plane of test surface measured from shock generator leading edge
YG = Y-X tan (FIE G)	coordinate parallel to Y-axis measured from surface of shock generator (inches)
YGS = X(tan(FIE S)-tan(FIE G))	computed location of shock wave in YG coordinate (inches)
Z	coordinate normal to X- and Y-axis measured from test surface (inches)
$\mu$	viscosity
$\rho$	density

#### Subscripts

1	as in free stream ahead of interaction
2	uniform conditions behind shock wave as calculated from oblique shock theory

#### Superscripted Variables

P BAR = P/P1	static pressure ratio
PT BAR = PT/PT1	pitot pressure ratio
P2 BAR = P2/P1	shock generator static pressure ratio
TT BAR = TT/TSTAG	total temperature ratio



## SECTION I

### INTRODUCTION

Interactions with three essential, spatial dimensions between shock waves and turbulent boundary layers have been the subject of some recent experimental investigations (Refs. 1-5). The present study is an extension of the work reported in Ref. 3. The problem under consideration is the interaction of an oblique shock wave, produced by a nonswept shock generator, with a turbulent boundary layer developed on a test surface which is perpendicular to the shock wave and the shock generator. The model configuration is shown in Figure 1.

The region studied in the course of this investigation extends from the area under the shock wave towards the axial corner formed by the test surface and the shock generator, including the turbulent boundary layer flow on the shock generator itself. The practical importance of this axial corner interaction in high speed flow stems from the observation of high local heating rates.

The main body of the present work is a detailed set of surface data complemented by a complete survey of the associated flow field. The objective of this work is to provide a better understanding of the physical phenomena by relating the flow field to surface data such as heat transfer. Another major objective is to provide a detailed set of measurements as a guide to numerical experiments in solving the full three-dimensional time-averaged Navier-Stokes equations for the present set of boundary conditions. Although no such numerical solutions have been reported in the past, recent advancements in the techniques of numerical computation and the high speed computer may yield solutions to this kind of problem in the near future.

The wind tunnel tests were carried out in the Princeton University high Reynolds number boundary layer channel. An interchangeable test section, specifically designed for this study, with a cross sectional area of 8 x 8 inches, was used as is reported in the earlier work (Ref. 3). The uniform free stream ahead of the interaction has a Mach number of 2.935 and a total temperature varying between 440 and 490°R. The corresponding initial freestream unit Reynolds number is approximately  $1.6 \times 10^6$  per inch. The wall temperature varied from 10 to 20% above its adiabatic value. The initial incoming boundary layer thickness is approximately 0.5 inches depending upon the location under consideration.

The data obtained under the subject contract is tabulated in eight detailed appendices, A through H. Brief descriptions of the different types of data presented and techniques used to obtain them, will be given in this document. The purposes of each of the specific tests, graphical presentation of typical data, analysis and discussion is the subject of the final AFFDL Technical Report, AFFDL TR 76-48, Part I.

## SECTION II

### EXPERIMENTAL PROGRAM

The experimental study was carried out in the Princeton University high Reynolds number boundary layer channel as noted in the Introduction. This blowdown wind tunnel has a cross section of 8 inches by 8 inches and is driven by an air supply stored at 3000 psia with a total volume of about 2000 cubic feet. For the present tests a Mach 3 two-dimensional nozzle was used, followed by the test section especially designed for this study. Almost all tests were limited to a 100 psia stagnation pressure level which gave a maximum running time of 6 minutes and resulted in a Reynolds number per inch of approximately  $1.6 \times 10^6$ . The stagnation temperature of the air in the tunnel could not be controlled, but was determined by ambient temperature conditions and the initial temperature of the supply lines. This resulted in noticeable changes in tunnel stagnation temperature on a day to day basis.

A special test section, incorporating a variable angle shock generator and its drive mechanism, was used in this work. A total range of shock generator deflection angles from  $2^\circ$  to  $14^\circ$  was covered in the present tests. This test section, with a cross sectional area of 8 by 8 inches, featured two large observation/instrumentation ports (12 inches in diameter) which rendered an unprecedented flexibility for mounting optical windows, surface instrumentation and probe drives covering the complete area of interest without affecting the model configuration. Details of this test section are given in Ref. 3.

Surface pressure studies have been made using a 2 inch diameter "pressure plug" located at different positions in the instrumentation port for different tests. A total of 45 pressure orifices were arranged in three parallel rows of 15 each. The orifice diameter was 0.032 inches for the two outer rows and



0.024 inches for the middle one. The pressures were sampled by a 48-port Scanivalve connected to the "pressure plug" by plastic tubing.

Surface heat transfer measurements have been performed by using an instrumented plug containing 8 slug-calorimeters. The quasi-transient technique of measuring heat transfer rates with these slug calorimeters is described in Ref. 3. The present slugs have a diameter of 0.088 inches and a thickness of 0.040 inches.

To determine the flow angularity a yaw-pitot probe has been employed. This probe mounted in a traverse mechanism, could be moved in the Z-direction as well as rotated in the X-Y plane around its tip. In making these measurements the yaw-pitot probe was kept aligned by observing the differential pressure in the side tubes. The probe used in the present tests has a tip height in the Z-direction of 0.016 inches and a width in the X-Y plane of 0.080 inches.

The flow field measurements were completed by measuring the total temperature with a fine wire thermocouple probe. The probes used alumel and chromel for the supports and the fine wires. The wires form a thermocouple junction in the middle between the supports. The wire diameter is 0.002 inches with an overall aspect ratio of 50. Two of these thermocouple probes have been constructed, one with the wire in the X-Y plane for measuring close to the test wall and a second one with the wire spanned in the Z-direction to obtain measurements very close to the shock generator.

In order to be able to carry out some pitot measurements in the boundary layer on the shock generator surface, another kind of angle sensitive pitot probe has been constructed. This so called pitch-pitot probe is of the same general type as the previously mentioned yaw-pitot probe, but is angle sensitive in a vertical plane parallel to the Z-axis. The testing procedure had to be

different since the probe drive mechanism employed cannot vary the pitch angle of a probe, thus eliminating the possibility of using the probe as a nulling device. An angle calibration in uniform flow was made for a yaw-pitot probe instead and this calibration was used for the geometrically similar pitch-pitot probe. The tip of this probe has a width of 0.011 inches in the Y-direction and a height of 0.065 inches in the Z-direction.

The tunnel stagnation pressure, tunnel stagnation temperature, temperature of the wind tunnel test wall and the shock generator have been recorded simultaneously with the other types of data in all tests. Four static pressure orifices on the surface of the shock generator have also been sampled at all times to give the pressure level behind the shock wave and thus a measurement of the effective shock generator angle.

To process the measurements, a ten-channel data acquisition system was used. This system centered around an ITI multiplexer which can scan ten electrical signals at a maximum rate of 200 readings per second. Subsequently the data is stored in an in-house IBM System/7 computer before being transmitted via a telephone line to the Princeton University Computer Center, where final processing took place on an IBM System/360, Model 91 computer. This type of online data acquisition and reduction, in combination with visual displays at the testing location, makes it possible to use the available test time efficiently.



### SECTION III

#### DATA TABULATIONS

##### 3.1 Surface Static Pressure Data

The surface static pressure distributions are presented in tabular form in Appendix A. This listing contains 72 separate tables, each representing a static pressure trace for one shock generator angle and one X location of the trace. The 9 X locations and 8 shock generator angles considered are as follows:

$X \approx 4.5, 5.0, 5.5, 7.0, 7.5, 8.0, 8.5, 9.0$  and  $9.5$  inches  
and  $NSGA = 2^\circ, 4^\circ, 6^\circ, 8^\circ, 10^\circ, 12^\circ, 13^\circ$ , and  $14^\circ$ .

FIE G in the heading of each table indicates the actual geometrical shock generator deflection angles in degrees. ALFA G is the effective shock generator angle as calculated from the oblique shock theory using the static pressure ratio P2 BAR and M1. P2 BAR is the static pressure measured on the shock generator nondimensionalized by the initial pressure P1. One extra quantity indicated in tables is the computed location of the oblique shock wave YGS in inches.

##### 3.2 Surface Heat Transfer Data with Variable Stagnation Pressure

Surface heat transfer measurements have been made in the boundary layer ahead of the interaction region for several different tunnel stagnation pressures. This in fact can be considered as a calibration of the heat transfer measurement technique since the measured heat transfer rate QDOT, converted into a coefficient CH, should follow the values predicted by the van Driest skin friction correlation, with a Reynolds analogy factor of 1.2 as suggested in Ref. 6.

The data is presented in Appendix B in 4 tables for slug calorimeters 2, 3, 4 and 5. Although these measurements are made for various stagnation pressures as indicated, all data presented in other appendices has been taken with a 100 psia stagnation pressure.

### 3.3 Surface Heat Transfer Data

The surface heat transfer results are presented in tabular form in Appendix C. This listing contains 28 tables, each representing a heat transfer distribution for one shock generator angle and one X location of the distribution. The 4 X locations and 7 shock generator angles considered are as follows:

X  $\approx$  4.5, <sup>5.0</sup>~~4.0~~, 7.0 and 7.5 inches  
and NSGA = 2°, 4°, 6°, 8°, 10°, 12°, and 14°.

### 3.4 Pitot Pressure-Yaw Angle Surveys

The results of the pitot-yaw probe measurements are presented in tabular form in Appendix D. At the top of each listing is a survey identification consisting of the nominal shock generator angle in degrees and the X, Y and YG locations of the survey in inches. The stagnation, wall and generator temperatures are given in degrees Rankine. These temperatures are the values averaged over the time that elapsed during the measurement of a complete survey. This elapsed time is indicated with the symbol TIME in seconds.

The appendix contains 49 surveys which can be divided into 7 groups as shown in Table 1.



**TABLE 1**  
**PITOT YAW SURVEYS**

<b>NSGA degrees</b>	<b>X inches</b>	<b>Number of surveys</b>
0	3.561	5
4	7.579	16
4	7.079	5
4	5.079	3
10	7.599	14
10	7.099	3
10	5.099	3

### **3.5     Static Pressure Surveys**

Static pressure results are given in Appendix E. The survey identification is identical with those of Appendix D. A total of 29 static pressure surveys are listed, they can be divided into 4 groups as shown in Table 2.

**TABLE 2**  
**STATIC PRESSURE SURVEYS**

<b>NSGA degrees</b>	<b>X inches</b>	<b>Number of surveys</b>
4	7.579	12
4	5.079	3
10	7.599	11
10	5.099	3

**TABLE 2:   Static Pressure Surveys**

### **3.6     Total Temperature Surveys**

Appendix F contains all the total temperature surveys obtained with the horizontal fine wire thermocouple probe. These 26 surveys are divided into 5 groups as shown in Table 3.

TABLE 3  
TOTAL TEMPERATURE SURVEYS

NSGA degrees	X inches	Number of surveys
0	3.561	1
4	7.579	10
4	5.079	3
10	7.599	9
10	5.099	3

### 3.7 Pitot Pressure - Pitch Angle Surveys

The results of the pitot-pitch probe measurements are presented in Appendix G. Since the tip of this probe was moved in the Y direction, each survey is identified with one single X and Z location. The Appendix includes 6 surveys: 3 surveys for the 4° and 3 surveys for the 10° shock generator deflection angle.

### 3.8 Total Temperature Surveys in the Immediate Vicinity of the Shock Generator

Appendix H presents the data obtained with a second fine wire thermocouple probe. The wire of this probe was positioned in the Z-direction which made it possible to obtain total temperature measurements close to the shock generator. This Appendix contains 13 surveys, some of which are repeated at the same location but with different tunnel temperature conditions resulting in different total temperature ratios TT BAR. The profiles are summarized in the Table 4.



TABLE 4

## TOTAL TEMPERATURE SURVEYS CLOSE TO SHOCK GENERATOR

NSGA =  $4^{\circ}$ , X = 7.58 inches

Z inches	Run	Test
1.480	2189	1
1.480	2189	8
0.880	2189	2
0.880	2189	7
0.280	2189	3
0.080	2189	4

NSGA =  $10^{\circ}$ , X = 7.60 inches

Z inches	Run	Test
1.480	2190	1
0.880	2190	2
0.880	2190	7
0.280	2190	3
0.080	2190	4
0.080	2191	1
0.080	2191	7

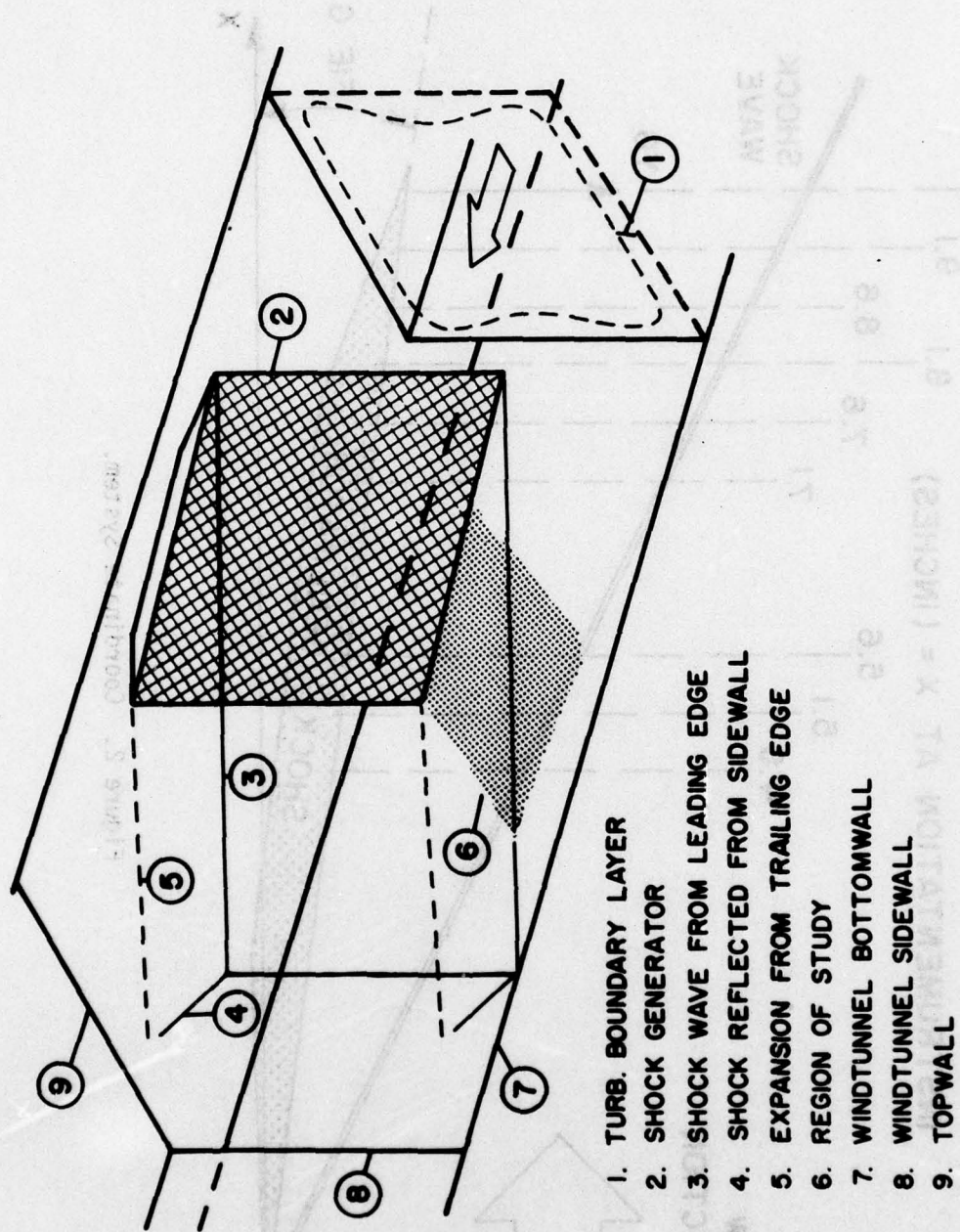


Figure 1. Schematic of Experimental Configuration.



$$YG = Y - X \tan(FIE G)$$

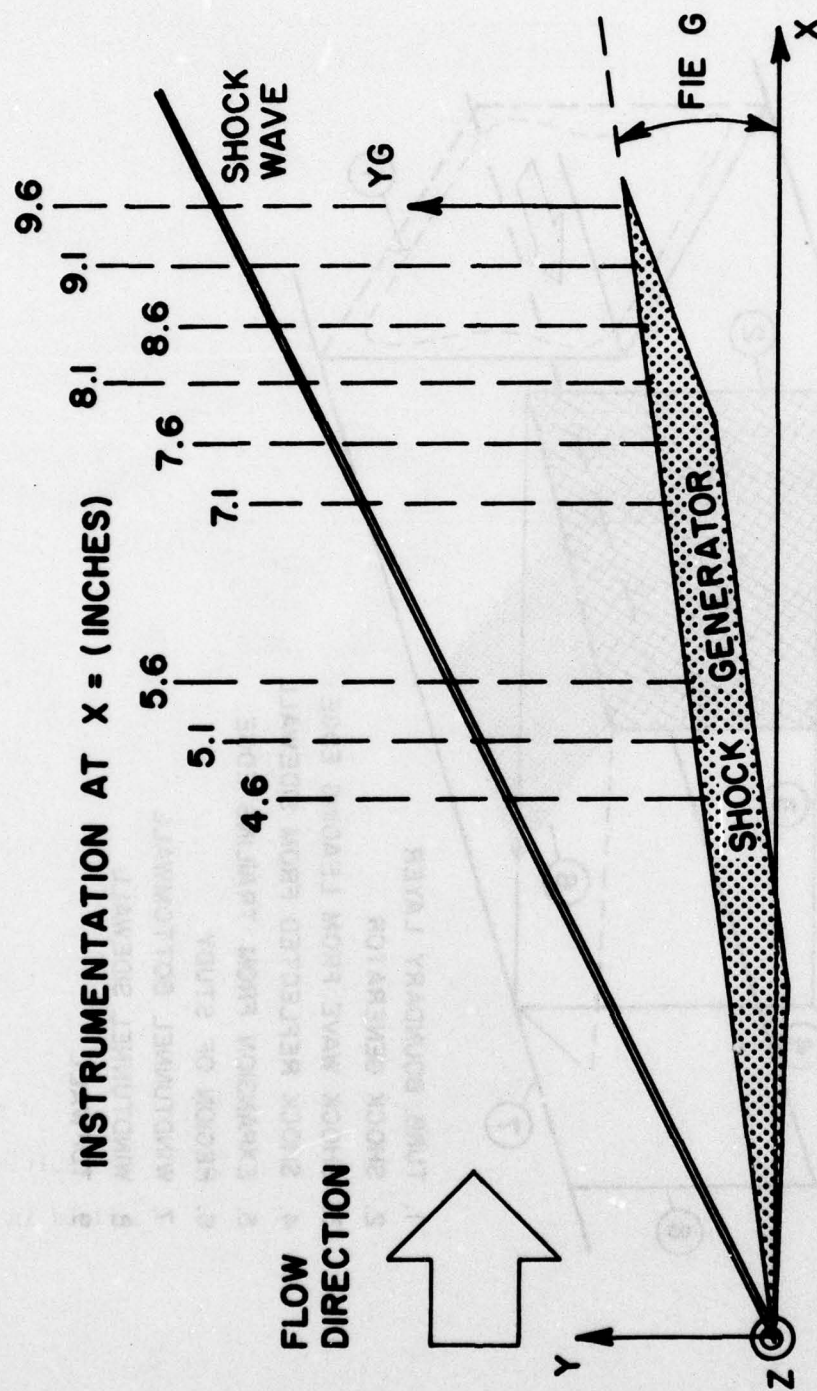


Figure 2. Coordinate System.

APPENDIX A

**SURFACE STATIC PRESSURE DATA**



A-1

# SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE = 2 DEGREES

FIF G = 1.62 DEGREES X=4.570 INCHES P2 BAR=1.160  
ALFA G= 1.98 DEGREES YGS=1.663 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.096	1.127	1.496	1.097	2.846	1.005	4.346	0.998
0.196	1.131	1.496	1.092	2.946	1.004	4.446	0.998
0.246	1.133	1.546	1.095	2.996	1.003	4.496	1.003
0.296	1.132	1.546	1.098	3.046	1.004	4.546	1.002
0.346	1.135	1.596	1.092	3.096	1.003	4.596	1.006
0.396	1.128	1.646	1.090	3.146	0.999	4.646	1.001
0.446	1.130	1.696	1.085	3.196	1.000	4.696	1.004
0.496	1.121	1.746	1.080	3.246	0.995	4.746	0.997
0.546	1.129	1.796	1.080	3.296	1.000	4.796	1.005
0.596	1.117	1.846	1.073	3.346	0.994	4.846	0.997
0.646	1.124	1.896	1.072	3.396	0.998	4.896	1.004
0.696	1.117	1.946	1.064	3.446	0.994	4.946	0.998
0.746	1.129	1.996	1.072	3.496	1.002	4.996	1.010
0.846	1.111	2.096	1.053	3.596	0.993	5.096	0.996
0.896	1.121	2.146	1.056	3.646	0.998	5.146	1.007
0.946	1.109	2.196	1.046	3.696	0.992	5.196	0.996
0.996	1.113	2.246	1.043	3.746	0.997	5.246	1.003
1.096	1.111	2.346	1.036	3.846	0.997	5.346	1.003
1.146	1.106	2.396	1.028	3.896	0.994	5.396	0.996
1.196	1.106	2.446	1.023	3.946	0.993	5.446	1.000
1.246	1.104	2.496	1.022	3.996	0.995	5.496	0.997
1.296	1.112	2.546	1.033	4.046	1.003	5.546	1.010
1.346	1.102	2.596	1.017	4.096	0.996	5.596	0.998
1.346	1.100	2.646	1.019	4.146	1.000	5.646	1.006
1.396	1.105	2.696	1.011	4.196	0.995	5.696	0.998
1.446	1.097	2.746	1.011	4.246	0.997	5.746	1.001
1.446	1.096	2.796	1.007	4.296	0.999	5.796	1.000

NOMINAL SHOCK GENERATOR ANGLE = 4 DEGREES

FIF G = 3.73 DEGREES X=4.579 INCHES P2 BAR=1.344  
ALFA G= 4.00 DEGREES YGS=1.641 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.061	1.303	1.361	1.223	2.811	1.021	4.311	0.998
0.111	1.303	1.411	1.216	2.861	1.019	4.361	1.002
0.161	1.305	1.411	1.222	2.911	1.016	4.411	1.000
0.211	1.304	1.461	1.216	2.961	1.013	4.461	1.004
0.261	1.293	1.511	1.210	3.011	1.008	4.511	0.997
0.311	1.299	1.561	1.205	3.061	1.005	4.561	1.003
0.361	1.281	1.611	1.197	3.111	1.000	4.611	0.994
0.411	1.299	1.661	1.195	3.161	1.004	4.661	1.003
0.461	1.273	1.711	1.187	3.211	0.997	4.711	0.994

## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.511	1.282	1.761	1.182	3.261	1.000	4.761	1.001
0.561	1.267	1.811	1.169	3.311	0.997	4.811	0.995
0.611	1.281	1.861	1.176	3.361	1.005	4.861	1.008
0.711	1.258	1.961	1.147	3.461	0.996	4.961	0.994
0.761	1.269	2.011	1.150	3.511	1.000	5.011	1.005
0.811	1.254	2.061	1.134	3.561	0.995	5.061	0.992
0.861	1.259	2.111	1.131	3.611	0.996	5.111	1.001
0.961	1.253	2.211	1.115	3.711	0.997	5.211	1.001
1.011	1.241	2.261	1.097	3.761	0.995	5.261	0.993
1.061	1.243	2.311	1.092	3.811	0.993	5.311	0.998
1.111	1.236	2.361	1.081	3.861	0.995	5.361	0.995
1.161	1.246	2.411	1.089	3.911	1.002	5.411	1.010
1.211	1.230	2.461	1.066	3.961	0.998	5.461	0.996
1.211	1.238	2.511	1.065	4.011	0.997	5.511	1.005
1.261	1.236	2.561	1.050	4.061	1.000	5.561	0.997
1.311	1.222	2.611	1.049	4.111	0.995	5.611	1.000
1.311	1.226	2.661	1.038	4.161	1.000	5.661	0.996
1.361	1.223	2.711	1.029	4.211	0.996		

NOMINAL SHOCK GENERATOR ANGLE= 6 DEGREES

FIF G = 5.64 DEGREES

X=4.587 INCHES

P2 BAR=1.559

ALFA G= 6.11 DEGREES

YGS=1.641 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.037	1.483	1.287	1.353	2.787	1.042	4.287	0.998
0.087	1.486	1.337	1.347	2.837	1.043	4.337	1.005
0.137	1.482	1.387	1.340	2.887	1.025	4.387	0.996
0.187	1.477	1.437	1.332	2.937	1.026	4.437	1.003
0.237	1.460	1.487	1.324	2.987	1.010	4.487	0.992
0.287	1.465	1.537	1.321	3.037	1.015	4.537	1.003
0.337	1.448	1.587	1.310	3.087	1.002	4.587	0.993
0.387	1.450	1.637	1.305	3.137	1.006	4.637	1.001
0.437	1.436	1.687	1.289	3.187	0.997	4.687	0.994
0.487	1.450	1.737	1.298	3.237	1.007	4.737	1.008
0.587	1.417	1.837	1.264	3.337	0.995	4.837	0.992
0.637	1.428	1.887	1.268	3.387	1.000	4.887	1.005
0.687	1.404	1.937	1.250	3.437	0.994	4.937	0.992
0.737	1.411	1.987	1.244	3.487	0.996	4.987	1.001
0.837	1.400	2.087	1.227	3.587	0.995	5.087	1.002
0.887	1.384	2.137	1.204	3.637	0.993	5.137	0.992
0.937	1.384	2.187	1.197	3.687	0.992	5.187	0.998
0.987	1.373	2.237	1.178	3.737	0.993	5.237	0.994
1.037	1.384	2.287	1.187	3.787	1.003	5.287	1.009
1.087	1.367	2.337	1.154	3.837	0.996	5.337	0.995
1.087	1.370	2.387	1.153	3.887	0.998	5.387	1.005
1.137	1.370	2.437	1.126	3.937	0.997	5.437	0.996
1.187	1.354	2.487	1.126	3.987	0.995	5.487	0.999
1.187	1.357	2.537	1.105	4.037	0.999	5.537	0.996



## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
1.237	1.353	2.587	1.080	4.087	0.996		
1.237	1.356	2.687	1.060	4.187	0.997		
1.287	1.342	2.737	1.059	4.237	1.001		

NOMINAL SHOCK GENERATOR ANGLE= 8 DEGREES

FIF G = 7.63 DEGREES      X=4.593 INCHES      P2 BAR=1.768  
 ALFA G = 7.95 DEGREES      YGS=1.642 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.057	1.690	1.257	1.479	2.707	1.133	4.157	1.000
0.107	1.694	1.307	1.470	2.757	1.091	4.207	1.003
0.157	1.698	1.357	1.458	2.807	1.096	4.257	0.999
0.207	1.677	1.407	1.456	2.857	1.057	4.307	1.002
0.257	1.674	1.457	1.444	2.907	1.065	4.357	0.995
0.307	1.647	1.507	1.438	2.957	1.032	4.407	1.003
0.357	1.665	1.557	1.424	3.007	1.036	4.457	0.994
0.457	1.615	1.607	1.431	3.057	1.014	4.507	1.001
0.507	1.628	1.707	1.400	3.107	1.023	4.557	0.994
0.557	1.597	1.757	1.401	3.207	0.997	4.607	1.006
0.607	1.601	1.807	1.386	3.257	1.008	4.707	0.991
0.707	1.580	1.857	1.380	3.307	0.993	4.757	1.004
0.757	1.557	1.957	1.365	3.357	1.000	4.807	0.992
0.807	1.554	2.007	1.343	3.457	0.998	4.857	1.001
0.857	1.538	2.057	1.337	3.507	0.993	4.957	1.002
0.907	1.548	2.107	1.321	3.557	0.993	5.007	0.994
0.957	1.520	2.157	1.328	3.607	0.994	5.057	0.999
0.957	1.528	2.207	1.296	3.657	1.003	5.107	0.995
1.007	1.521	2.257	1.293	3.707	0.995	5.157	1.007
1.057	1.500	2.307	1.265	3.757	0.999	5.207	0.995
1.057	1.509	2.357	1.258	3.807	0.995	5.257	1.003
1.107	1.500	2.407	1.236	3.857	0.996	5.307	0.994
1.107	1.507	2.457	1.199	3.907	0.997	5.357	0.999
1.157	1.484	2.557	1.161	3.957	0.995	5.407	0.994
1.157	1.501	2.607	1.165	4.057	0.996		
1.207	1.491	2.657	1.128	4.107	1.000		

## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE=10 DEGREES

FIF G = 9.72 DEGREES

X=4.599 INCHES

P2 BAR=2.020

ALFA G= 9.97 DEGREES

YGS=1.667 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.018	1.950	1.168	1.628	2.568	1.315	3.968	1.002
0.068	1.955	1.218	1.610	2.618	1.270	4.018	0.998
0.118	1.955	1.268	1.596	2.668	1.272	4.068	1.004
0.168	1.935	1.318	1.580	2.718	1.270	4.118	0.997
0.218	1.949	1.368	1.569	2.768	1.276	4.168	1.003
0.318	1.883	1.418	1.557	2.818	1.167	4.218	0.995
0.368	1.891	1.468	1.561	2.868	1.173	4.268	1.003
0.418	1.850	1.568	1.535	2.918	1.112	4.318	0.996
0.468	1.849	1.618	1.533	2.968	1.128	4.368	1.000
0.568	1.818	1.668	1.520	3.068	1.047	4.418	0.996
0.618	1.783	1.718	1.515	3.118	1.065	4.468	1.006
0.668	1.775	1.818	1.502	3.168	1.022	4.568	0.992
0.718	1.753	1.868	1.480	3.218	1.030	4.618	1.003
0.768	1.764	1.918	1.480	3.318	1.011	4.668	0.991
0.818	1.726	1.968	1.464	3.368	0.999	4.718	1.001
0.818	1.739	2.018	1.476	3.418	0.999	4.818	1.001
0.868	1.721	2.068	1.449	3.468	0.999	4.868	0.993
0.918	1.690	2.118	1.447	3.518	1.005	4.918	0.998
0.918	1.704	2.168	1.429	3.568	0.997	4.968	0.995
0.968	1.696	2.218	1.422	3.618	0.999	5.018	1.008
0.968	1.698	2.268	1.409	3.668	0.998	5.068	0.996
1.018	1.663	2.318	1.381	3.718	0.995	5.118	1.003
1.018	1.684	2.418	1.347	3.768	0.998	5.168	0.996
1.068	1.669	2.468	1.347	3.818	0.996	5.218	0.998
1.118	1.648	2.518	1.312	3.918	0.996	5.268	0.995

NOMINAL SHOCK GENERATOR ANGLE=12 DEGREES

FIF G =11.78 DEGREES

X=4.604 INCHES

P2 BAR=2.304

ALFA G=12.02 DEGREES

YGS=1.717 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.030	2.240	1.180	1.759	2.580	1.439	3.980	0.999
0.080	2.273	1.230	1.740	2.630	1.444	4.030	1.003
0.180	2.217	1.280	1.699	2.680	1.406	4.080	0.995
0.230	2.219	1.330	1.701	2.730	1.407	4.130	1.003
0.280	2.173	1.430	1.655	2.780	1.361	4.180	0.995
0.330	2.165	1.480	1.640	2.830	1.372	4.230	1.000
0.430	2.117	1.530	1.628	2.930	1.286	4.280	0.996
0.480	2.071	1.580	1.611	2.980	1.297	4.330	1.007
0.530	2.058	1.680	1.606	3.030	1.219	4.430	0.995
0.580	2.019	1.730	1.599	3.080	1.228	4.480	1.002
0.630	2.038	1.780	1.592	3.180	1.155	4.530	0.996



## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.680	1.977	1.830	1.587	3.230	1.084	4.580	1.000
0.680	2.005	1.880	1.603	3.280	1.086	4.680	1.000
0.730	1.970	1.930	1.578	3.330	1.038	4.730	0.996
0.780	1.926	1.980	1.580	3.380	1.047	4.780	0.996
0.780	1.963	2.030	1.565	3.430	1.012	4.830	0.996
0.830	1.931	2.080	1.557	3.480	1.017	4.880	1.007
0.830	1.948	2.130	1.550	3.530	1.001	4.930	0.996
0.880	1.902	2.180	1.546	3.580	1.003	4.980	1.003
0.880	1.926	2.280	1.522	3.630	1.001	5.030	0.995
0.930	1.905	2.330	1.516	3.680	1.001	5.080	0.998
0.980	1.871	2.380	1.500	3.780	1.000	5.130	0.996
1.030	1.843	2.430	1.502	3.830	1.002		
1.080	1.816	2.480	1.475	3.880	1.001		
1.130	1.795	2.530	1.473	3.930	1.005		

NOMINAL SHOCK GENERATOR ANGLE=13 DEGREES

FIF G =12.81 DEGREES

X=4.606 INCHES

P2 BAR=2.455

ALFA G=13.04 DEGREES

YGS=1.727 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.110	2.401	1.160	1.850	2.510	1.535	3.860	1.005
0.160	2.400	1.210	1.816	2.560	1.534	3.910	0.999
0.210	2.374	1.260	1.809	2.610	1.507	3.960	1.003
0.260	2.349	1.360	1.723	2.660	1.505	4.010	0.995
0.360	2.299	1.410	1.708	2.710	1.475	4.060	1.003
0.410	2.249	1.460	1.691	2.760	1.484	4.110	0.995
0.460	2.228	1.510	1.664	2.860	1.426	4.160	1.002
0.510	2.181	1.610	1.638	2.910	1.440	4.210	0.996
0.560	2.200	1.660	1.630	2.960	1.381	4.260	1.008
0.610	2.126	1.710	1.624	3.010	1.386	4.360	0.993
0.610	2.157	1.760	1.630	3.110	1.325	4.410	1.004
0.660	2.119	1.810	1.644	3.160	1.250	4.460	0.993
0.710	2.069	1.860	1.634	3.210	1.249	4.510	1.001
0.710	2.098	1.910	1.628	3.260	1.170	4.610	1.000
0.760	2.079	1.960	1.629	3.310	1.180	4.660	0.994
0.760	2.084	2.010	1.618	3.360	1.097	4.710	0.998
0.810	2.030	2.060	1.618	3.410	1.100	4.760	0.996
0.810	2.075	2.110	1.614	3.460	1.042	4.810	1.007
0.860	2.046	2.210	1.592	3.510	1.040	4.860	0.997
0.910	2.005	2.260	1.584	3.560	1.017	4.910	1.003
0.960	1.978	2.310	1.575	3.610	1.018	4.960	0.997
1.010	1.942	2.360	1.578	3.710	1.005	5.010	0.998
1.060	1.916	2.410	1.557	3.760	1.009	5.060	0.997
1.110	1.885	2.460	1.555	3.810	1.001		

## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE=14 DEGREES

FIF G =13.80 DEGREES

X=4.607 INCHES

P2 BAR=2.624

ALFA G=14.13 DEGREES

YGS=1.762 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.042	2.592	1.192	1.873	2.392	1.629	3.542	1.077
0.092	2.610	1.242	1.824	2.392	1.616	3.542	1.074
0.142	2.554	1.242	1.821	2.442	1.617	3.592	1.070
0.192	2.539	1.292	1.803	2.442	1.615	3.642	1.025
0.242	2.511	1.342	1.759	2.492	1.608	3.642	1.029
0.292	2.478	1.392	1.735	2.492	1.606	3.692	1.023
0.342	2.440	1.442	1.706	2.542	1.601	3.692	1.027
0.392	2.409	1.492	1.693	2.592	1.587	3.742	1.012
0.442	2.403	1.542	1.679	2.642	1.582	3.742	1.008
0.542	2.310	1.592	1.664	2.692	1.565	3.792	1.010
0.592	2.299	1.642	1.673	2.742	1.560	3.842	1.000
0.642	2.263	1.692	1.679	2.792	1.539	3.892	1.001
0.692	2.231	1.792	1.690	2.842	1.535	3.942	0.996
0.792	2.172	1.842	1.689	2.892	1.502	3.992	0.999
0.842	2.124	1.892	1.701	2.942	1.510	4.042	1.000
0.892	2.101	1.942	1.694	3.042	1.444	4.092	1.000
0.942	2.051	2.042	1.686	3.092	1.449	4.142	1.006
0.992	2.062	2.092	1.675	3.142	1.394	4.192	1.010
1.042	1.987	2.142	1.667	3.192	1.388	4.292	1.014
1.042	1.981	2.192	1.653	3.292	1.317	4.342	1.020
1.092	1.960	2.242	1.655	3.342	1.247	4.392	1.025
1.142	1.892	2.292	1.636	3.392	1.230	4.442	1.027
1.142	1.898	2.292	1.638	3.442	1.154		
1.192	1.886	2.342	1.637	3.492	1.144		

NOMINAL SHOCK GENERATOR ANGLE= 2 DEGREES

FIF G = 1.62 DEGREES

X=5.070 INCHES

P2 BAR=1.160

ALFA G= 1.98 DEGREES

YGS=1.845 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.032	1.150	1.432	1.108	2.782	1.029	4.282	0.991
0.082	1.138	1.482	1.112	2.832	1.016	4.332	0.999
0.132	1.143	1.482	1.101	2.882	1.020	4.382	1.006
0.232	1.137	1.532	1.106	2.982	1.014	4.482	1.002
0.332	1.138	1.582	1.102	3.082	1.013	4.582	1.006
0.382	1.132	1.632	1.101	3.132	1.010	4.632	1.000
0.432	1.133	1.682	1.095	3.182	1.008	4.682	1.003
0.482	1.130	1.732	1.097	3.232	1.009	4.732	1.000
0.532	1.133	1.782	1.093	3.282	1.005	4.782	1.002
0.582	1.124	1.832	1.088	3.332	1.004	4.832	0.998
0.632	1.133	1.882	1.088	3.382	1.006	4.882	1.005
0.682	1.126	1.932	1.086	3.432	1.001	4.932	0.998



## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.732	1.129	1.982	1.076	3.482	1.003	4.982	1.003
0.832	1.125	2.082	1.078	3.582	0.998	5.082	0.997
0.882	1.126	2.132	1.066	3.632	1.000	5.132	1.003
0.932	1.126	2.182	1.073	3.682	1.003	5.182	1.001
0.982	1.123	2.232	1.061	3.732	0.998	5.232	1.002
1.032	1.118	2.282	1.061	3.782	0.998	5.282	0.997
1.082	1.118	2.332	1.049	3.832	0.994	5.332	0.998
1.132	1.113	2.382	1.053	3.882	0.996	5.382	0.995
1.182	1.117	2.432	1.042	3.932	1.000	5.432	1.003
1.232	1.112	2.482	1.043	3.982	0.995	5.482	0.994
1.282	1.113	2.582	1.038	4.082	0.999	5.582	0.998
1.332	1.116	2.682	1.024	4.182	0.995	5.682	0.994
1.382	1.107	2.732	1.029	4.232	1.002	5.732	1.003
1.382	1.111	2.782	1.018	4.282	1.005	5.782	0.993

NOMINAL SHOCK GENERATOR ANGLE = 4 DEGREES

FIE G = 3.73 DEGREES

X=5.079 INCHES

P2 BAR=1.344

ALFA G= 4.00 DEGREES

YGS=1.820 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.078	1.303	1.378	1.240	2.828	1.046	4.328	1.001
0.178	1.309	1.428	1.238	2.928	1.037	4.428	1.002
0.278	1.289	1.478	1.238	2.978	1.039	4.478	0.995
0.278	1.299	1.528	1.225	3.028	1.023	4.528	1.000
0.328	1.297	1.578	1.226	3.078	1.029	4.578	0.999
0.378	1.295	1.628	1.217	3.128	1.017	4.628	1.001
0.428	1.288	1.678	1.215	3.178	1.018	4.678	0.996
0.478	1.288	1.728	1.209	3.228	1.012	4.728	1.003
0.528	1.281	1.778	1.210	3.278	1.012	4.778	0.995
0.578	1.281	1.828	1.193	3.328	1.007	4.828	1.002
0.678	1.275	1.928	1.195	3.428	1.005	4.928	0.994
0.728	1.274	1.978	1.174	3.478	1.002	4.978	1.000
0.778	1.276	2.028	1.182	3.528	1.006	5.028	1.000
0.828	1.270	2.078	1.161	3.578	0.998	5.078	0.999
0.878	1.267	2.128	1.161	3.628	0.999	5.128	0.995
0.928	1.261	2.178	1.141	3.678	0.995	5.178	0.996
0.978	1.262	2.228	1.146	3.728	0.997	5.228	0.993
1.078	1.260	2.278	1.127	3.778	0.998	5.278	1.001
1.078	1.254	2.328	1.128	3.828	0.996	5.328	0.992
1.128	1.254	2.428	1.117	3.928	1.000	5.428	0.996
1.178	1.254	2.528	1.093	4.028	0.995	5.528	0.990
1.178	1.251	2.578	1.096	4.078	0.998	5.578	1.000
1.228	1.248	2.628	1.076	4.128	1.005	5.628	0.991
1.278	1.244	2.628	1.078	4.128	0.990		
1.328	1.250	2.678	1.059	4.178	0.996		
1.328	1.240	2.728	1.062	4.228	1.004		

## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE= 6 DEGREES

FIF G = 5.64 DEGRFES  
ALFA G= 6.11 DEGRFESX=5.087 INCHES  
YGS=1.820 INCHES

P2 BAR=1.559

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.038	1.486	1.238	1.373	2.588	1.141	4.038	0.996
0.088	1.426	1.288	1.372	2.688	1.113	4.088	1.003
0.138	1.484	1.338	1.370	2.788	1.093	4.188	1.001
0.188	1.477	1.388	1.357	2.838	1.095	4.288	1.003
0.238	1.475	1.438	1.356	2.888	1.069	4.338	0.996
0.288	1.470	1.488	1.347	2.938	1.074	4.388	1.001
0.338	1.462	1.538	1.344	2.988	1.052	4.438	0.998
0.388	1.460	1.588	1.337	3.038	1.053	4.488	1.003
0.438	1.451	1.638	1.338	3.088	1.035	4.538	0.995
0.538	1.444	1.688	1.321	3.138	1.036	4.588	1.005
0.588	1.436	1.788	1.320	3.188	1.021	4.638	0.996
0.638	1.433	1.838	1.302	3.288	1.018	4.688	1.002
0.688	1.427	1.888	1.306	3.338	1.009	4.788	0.995
0.738	1.421	1.938	1.289	3.388	1.011	4.838	0.999
0.788	1.412	1.988	1.287	3.438	1.003	4.888	0.998
0.838	1.412	2.038	1.265	3.488	1.003	4.938	0.998
0.888	1.405	2.088	1.269	3.538	0.997	4.988	0.994
0.938	1.402	2.138	1.243	3.588	0.998	5.038	0.996
0.988	1.397	2.188	1.245	3.638	0.998	5.088	0.991
1.038	1.398	2.288	1.229	3.688	0.997	5.138	1.002
1.088	1.389	2.388	1.199	3.788	1.000	5.188	0.991
1.088	1.391	2.438	1.200	3.888	0.996	5.288	0.996
1.138	1.383	2.488	1.180	3.938	0.999	5.388	0.990
1.188	1.387	2.488	1.169	3.988	1.004	5.438	1.001
1.188	1.378	2.538	1.141	3.988	0.990	5.488	0.990

NOMINAL SHOCK GENERATOR ANGLE= 8 DEGREES

FIF G = 7.63 DEGRFES  
ALFA G= 7.95 DEGRFESX=5.093 INCHES  
YGS=1.820 INCHES

P2 BAR=1.768

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.040	1.657	1.240	1.500	2.690	1.225	4.140	1.002
0.090	1.703	1.290	1.503	2.740	1.189	4.190	0.996
0.140	1.691	1.340	1.488	2.790	1.191	4.240	1.000
0.190	1.693	1.390	1.480	2.840	1.156	4.290	0.999
0.240	1.684	1.440	1.475	2.890	1.152	4.340	1.002
0.290	1.671	1.490	1.471	2.940	1.120	4.390	0.995
0.390	1.660	1.540	1.457	2.990	1.118	4.440	1.003
0.440	1.643	1.640	1.451	3.040	1.084	4.490	0.994
0.490	1.644	1.690	1.436	3.140	1.075	4.540	1.000
0.540	1.625	1.740	1.439	3.190	1.045	4.640	0.994
0.590	1.623	1.790	1.422	3.240	1.050	4.690	0.999



## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.640	1.601	1.840	1.422	3.290	1.074	4.740	0.999
0.690	1.602	1.890	1.402	3.340	1.027	4.790	0.999
0.740	1.586	1.940	1.408	3.390	1.008	4.840	0.995
0.790	1.579	1.990	1.385	3.440	1.012	4.890	0.996
0.840	1.574	2.040	1.386	3.490	1.005	4.940	0.993
0.890	1.567	2.140	1.370	3.540	1.003	4.990	1.001
0.890	1.559	2.240	1.342	3.640	1.004	5.040	0.991
0.940	1.560	2.290	1.345	3.740	0.996	5.140	0.996
0.990	1.548	2.340	1.323	3.790	1.003	5.240	0.990
1.040	1.548	2.340	1.317	3.840	1.005	5.290	1.001
1.040	1.537	2.390	1.285	3.840	0.989	5.340	0.991
1.090	1.536	2.440	1.286	3.890	0.995		
1.140	1.525	2.540	1.255	3.940	1.003		
1.190	1.524	2.640	1.227	4.040	0.999		

NOMINAL SHOCK GENERATOR ANGLE=10 DEGREES

FIF G = 9.72 DEGREES

X=5.099 INCHES

P2 BAR=2.020

ALFA G = 9.97 DEGREES

YGS=1.848 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.033	1.955	1.183	1.654	2.583	1.378	3.983	1.003
0.083	1.947	1.233	1.646	2.633	1.381	4.033	0.998
0.133	1.958	1.283	1.625	2.683	1.354	4.083	1.001
0.233	1.937	1.333	1.621	2.733	1.347	4.133	0.998
0.283	1.919	1.383	1.594	2.783	1.318	4.183	1.001
0.333	1.910	1.483	1.582	2.833	1.311	4.233	0.994
0.383	1.887	1.533	1.562	2.883	1.271	4.283	1.003
0.433	1.879	1.583	1.563	2.983	1.253	4.333	0.994
0.483	1.846	1.633	1.549	3.033	1.202	4.383	1.000
0.533	1.856	1.683	1.546	3.083	1.205	4.483	0.996
0.583	1.822	1.733	1.532	3.133	1.149	4.533	0.998
0.633	1.823	1.783	1.537	3.183	1.150	4.583	1.001
0.683	1.804	1.833	1.518	3.233	1.098	4.633	0.998
0.733	1.805	1.883	1.519	3.283	1.101	4.683	0.997
0.783	1.788	1.983	1.508	3.333	1.059	4.733	0.996
0.833	1.783	2.083	1.487	3.383	1.058	4.783	0.994
0.883	1.768	2.133	1.488	3.483	1.035	4.833	1.000
0.883	1.761	2.183	1.468	3.583	1.015	4.883	0.991
0.883	1.747	2.183	1.474	3.633	1.026	4.983	0.996
0.933	1.740	2.233	1.449	3.683	0.997	5.083	0.991
0.983	1.726	2.283	1.452	3.683	1.010	5.133	0.999
1.033	1.727	2.383	1.428	3.733	1.000	5.183	0.992
1.083	1.680	2.483	1.409	3.783	1.006		
1.133	1.689	2.533	1.404	3.883	1.002		

## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE=12 DEGREES

FIF G =11.78 DEGRFES

X=5.104 INCHES

P2 BAR=2.304

ALFA G=12.02 DEGRFES

YGS=1.903 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.076	2.184	1.126	1.835	2.476	1.542	3.826	1.012
0.126	2.247	1.176	1.837	2.526	1.528	3.876	1.017
0.176	2.234	1.226	1.780	2.576	1.521	3.926	1.003
0.226	2.217	1.326	1.758	2.626	1.510	3.976	1.005
0.276	2.199	1.376	1.704	2.676	1.506	4.026	1.001
0.326	2.160	1.426	1.707	2.726	1.484	4.076	0.998
0.376	2.162	1.476	1.668	2.826	1.477	4.126	1.002
0.426	2.121	1.526	1.662	2.876	1.444	4.176	0.997
0.476	2.116	1.576	1.628	2.926	1.451	4.226	1.001
0.526	2.101	1.626	1.632	2.976	1.410	4.326	0.997
0.576	2.093	1.676	1.608	3.026	1.412	4.376	0.999
0.576	2.072	1.726	1.606	3.076	1.363	4.426	1.000
0.626	2.069	1.826	1.603	3.126	1.367	4.476	0.998
0.676	2.046	1.926	1.597	3.176	1.306	4.526	0.996
0.726	2.038	1.976	1.596	3.226	1.313	4.576	0.995
0.726	2.010	2.026	1.592	3.326	1.256	4.626	0.992
0.776	1.999	2.026	1.601	3.426	1.184	4.676	0.999
0.826	1.983	2.076	1.586	3.476	1.178	4.726	0.991
0.876	1.987	2.126	1.585	3.526	1.117	4.826	0.998
0.926	1.925	2.226	1.571	3.526	1.111	4.926	0.993
0.976	1.928	2.326	1.563	3.576	1.076	4.976	0.998
1.026	1.885	2.376	1.560	3.626	1.064	5.026	0.994
1.076	1.873	2.426	1.542	3.726	1.025		

NOMINAL SHOCK GENERATOR ANGLE=13 DEGREES

FIF G =12.81 DEGRFES

X=5.106 INCHES

P2 BAR=2.455

ALFA G=13.04 DEGRFES

YGS=1.914 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.046	2.392	1.096	1.961	2.446	1.602	3.796	1.090
0.096	2.399	1.146	1.902	2.496	1.600	3.846	1.032
0.146	2.402	1.246	1.877	2.546	1.587	3.896	1.037
0.196	2.388	1.296	1.815	2.596	1.587	3.946	1.012
0.246	2.341	1.346	1.807	2.646	1.568	3.996	1.011
0.296	2.352	1.396	1.759	2.746	1.560	4.046	1.005
0.346	2.299	1.446	1.748	2.796	1.537	4.096	1.000
0.396	2.295	1.496	1.700	2.846	1.542	4.146	1.001
0.446	2.276	1.546	1.706	2.896	1.515	4.246	0.997
0.496	2.262	1.596	1.657	2.946	1.515	4.296	1.000
0.496	2.248	1.646	1.659	2.996	1.487	4.346	1.001
0.546	2.246	1.746	1.641	3.046	1.489	4.396	0.998
0.596	2.207	1.846	1.626	3.096	1.448	4.446	0.997



## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.646	2.194	1.896	1.627	3.146	1.451	4.496	0.996
0.646	2.181	1.946	1.627	3.246	1.414	4.546	0.995
0.696	2.161	1.946	1.634	3.346	1.359	4.596	1.001
0.746	2.144	1.996	1.634	3.396	1.347	4.646	0.994
0.796	2.140	2.046	1.637	3.446	1.296	4.746	0.999
0.846	2.068	2.146	1.629	3.446	1.292	4.846	0.993
0.896	2.085	2.246	1.626	3.496	1.229	4.896	1.008
0.946	2.027	2.296	1.620	3.546	1.226	4.946	0.993
0.996	2.020	2.346	1.609	3.646	1.144		
1.046	1.972	2.396	1.613	3.746	1.082		

NOMINAL SHOCK GENERATOR ANGLE=14 DEGREES

FIE G =13.80 DEGREES

X=5.107 INCHES

P2 BAR=2.624

ALFA G=14.13 DEGRFES

YGS=1.947 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.019	2.563	0.910	2.118	1.719	1.668	2.469	1.657
0.069	2.580	0.919	2.168	1.769	1.687	2.519	1.642
0.119	2.577	0.969	2.093	1.819	1.671	2.569	1.653
0.169	2.576	1.019	2.085	1.869	1.671	2.619	1.637
0.219	2.544	1.069	2.056	1.919	1.672	2.669	1.638
0.269	2.542	1.069	2.023	1.969	1.682	2.719	1.629
0.319	2.481	1.119	2.017	2.019	1.677	2.769	1.625
0.419	2.473	1.169	1.961	2.069	1.687	2.819	1.607
0.469	2.397	1.219	1.957	2.119	1.674	2.919	1.599
0.519	2.426	1.269	1.872	2.169	1.666	2.969	1.580
0.569	2.347	1.319	1.878	2.169	1.692	3.019	1.584
0.619	2.340	1.369	1.808	2.219	1.675	3.069	1.558
0.669	2.272	1.419	1.807	2.269	1.681	3.119	1.560
0.719	2.294	1.469	1.758	2.319	1.672	3.169	1.530
0.769	2.203	1.519	1.750	2.319	1.667	3.219	1.544
0.819	2.225	1.569	1.700	2.369	1.674		
0.869	2.160	1.669	1.697	2.419	1.659		

NOMINAL SHOCK GENERATOR ANGLE= 2 DEGREES

FIE G = 1.62 DEGREES

X=5.070 INCHES

P2 BAR=1.160

ALFA G= 1.98 DEGRFES

YGS=2.027 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.018	1.141	1.368	1.124	2.768	1.048	4.268	1.008
0.118	1.143	1.418	1.120	2.868	1.043	4.368	1.009
0.168	1.139	1.468	1.120	2.918	1.035	4.418	1.002
0.218	1.142	1.468	1.117	2.968	1.034	4.468	1.007
0.318	1.142	1.568	1.113	3.068	1.027	4.568	1.007
0.368	1.139	1.618	1.114	3.118	1.027	4.618	1.004
0.418	1.143	1.668	1.110	3.168	1.026	4.668	1.010
0.468	1.135	1.718	1.107	3.218	1.021	4.718	1.000

## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.518	1.150	1.768	1.108	3.268	1.033	4.768	1.018
0.568	1.134	1.818	1.103	3.318	1.018	4.818	1.001
0.618	1.140	1.868	1.103	3.368	1.025	4.868	1.012
0.668	1.132	1.918	1.097	3.418	1.015	4.918	1.001
0.718	1.142	1.968	1.102	3.468	1.023	4.968	1.012
0.818	1.125	2.068	1.082	3.568	1.005	5.068	0.997
0.868	1.140	2.118	1.095	3.618	1.016	5.118	1.010
0.918	1.127	2.168	1.081	3.668	1.007	5.168	0.998
0.968	1.137	2.218	1.084	3.718	1.010	5.218	1.007
1.018	1.127	2.268	1.074	3.768	1.005	5.268	0.998
1.068	1.134	2.318	1.076	3.818	1.008	5.318	1.006
1.118	1.126	2.368	1.066	3.868	1.004	5.368	0.998
1.168	1.129	2.418	1.063	3.918	1.004	5.418	1.003
1.218	1.126	2.468	1.060	3.968	1.003	5.468	1.001
1.268	1.127	2.518	1.053	4.018	1.002	5.518	1.002
1.268	1.125	2.568	1.049	4.068	1.000	5.568	0.999
1.318	1.121	2.618	1.053	4.118	1.005	5.618	1.006
1.368	1.126	2.718	1.045	4.218	1.005	5.718	1.005

NOMINAL SHOCK GENERATOR ANGLE = 4 DEGREES

FIF G = 3.73 DEGREES

X=5.579 INCHES

P2 BAR=1.344

ALFA G= 4.00 DEGREES

YGS=2.000 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.045	1.315	1.295	1.257	2.795	1.094	4.295	1.005
0.145	1.312	1.395	1.250	2.895	1.079	4.395	1.003
0.195	1.312	1.445	1.256	2.945	1.070	4.445	1.002
0.245	1.306	1.495	1.246	2.995	1.068	4.495	1.006
0.295	1.301	1.545	1.247	3.045	1.057	4.545	1.000
0.345	1.315	1.595	1.243	3.095	1.064	4.595	1.014
0.395	1.295	1.645	1.236	3.145	1.046	4.645	1.001
0.445	1.299	1.695	1.236	3.195	1.048	4.695	1.010
0.495	1.288	1.745	1.225	3.245	1.036	4.745	1.000
0.545	1.297	1.795	1.229	3.295	1.040	4.795	1.012
0.645	1.281	1.895	1.206	3.395	1.020	4.895	0.994
0.695	1.293	1.945	1.215	3.445	1.027	4.945	1.008
0.745	1.284	1.995	1.201	3.495	1.016	4.995	0.996
0.795	1.288	2.045	1.201	3.545	1.018	5.045	1.005
0.845	1.282	2.095	1.190	3.595	1.009	5.095	0.996
0.895	1.285	2.145	1.187	3.645	1.013	5.145	1.002
0.945	1.277	2.195	1.175	3.695	1.007	5.195	0.995
0.995	1.276	2.245	1.170	3.745	1.007	5.245	1.000
1.045	1.271	2.295	1.162	3.795	1.007	5.295	0.997
1.095	1.271	2.345	1.152	3.845	1.004	5.345	1.000
1.095	1.271	2.395	1.143	3.895	1.005	5.395	0.996
1.145	1.263	2.445	1.145	3.945	1.005	5.445	1.003
1.195	1.269	2.545	1.131	4.045	1.002	5.545	1.002
1.195	1.267	2.595	1.120	4.095	1.007		



## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
1.245	1.264	2.695	1.110	4.195	1.007		
1.295	1.262	2.745	1.098	4.245	1.001		

NOMINAL SHOCK GENERATOR ANGLE = 6 DEGREES

FIF G = 5.64 DEGRFES

X=5.587 INCHES

P2 BAR=1.559

ALFA G= 6.11 DEGRFES

YGS=1.999 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.038	1.505	1.238	1.389	2.638	1.198	4.088	1.001
0.088	1.498	1.288	1.392	2.738	1.173	4.138	1.007
0.138	1.497	1.338	1.380	2.788	1.157	4.238	1.006
0.188	1.512	1.388	1.379	2.838	1.155	4.288	1.003
0.238	1.482	1.438	1.377	2.888	1.133	4.338	1.008
0.288	1.481	1.488	1.368	2.938	1.139	4.388	1.000
0.338	1.469	1.538	1.368	2.988	1.109	4.438	1.015
0.388	1.474	1.588	1.353	3.038	1.110	4.488	1.000
0.488	1.446	1.638	1.359	3.088	1.085	4.538	1.010
0.538	1.461	1.738	1.333	3.138	1.090	4.588	0.999
0.588	1.444	1.788	1.344	3.238	1.054	4.638	1.010
0.638	1.451	1.838	1.329	3.288	1.060	4.738	0.994
0.688	1.439	1.888	1.328	3.338	1.040	4.788	1.006
0.738	1.443	1.938	1.318	3.388	1.042	4.838	0.996
0.788	1.434	1.988	1.316	3.438	1.029	4.888	1.003
0.838	1.431	2.038	1.303	3.488	1.029	4.938	0.995
0.888	1.427	2.088	1.296	3.538	1.019	4.988	1.002
0.938	1.423	2.138	1.284	3.588	1.017	5.038	0.995
0.988	1.423	2.188	1.278	3.638	1.013	5.088	1.002
0.988	1.412	2.238	1.264	3.688	1.009	5.138	0.997
1.038	1.416	2.288	1.267	3.738	1.006	5.188	1.002
1.038	1.415	2.388	1.248	3.788	1.008	5.238	0.996
1.088	1.408	2.438	1.237	3.888	1.004	5.288	1.006
1.138	1.405	2.538	1.220	3.938	1.008	5.388	1.005
1.138	1.401	2.588	1.202	4.038	1.009		

NOMINAL SHOCK GENERATOR ANGLE = 8 DEGREES

FIF G = 7.63 DEGREES

X=5.593 INCHES

P2 BAR=1.768

ALFA G= 7.95 DEGREES

YGS=1.999 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.023	1.719	1.173	1.542	2.573	1.327	3.923	1.002
0.073	1.722	1.223	1.529	2.623	1.309	3.973	1.009
0.123	1.722	1.273	1.529	2.673	1.305	4.073	1.007
0.173	1.708	1.323	1.514	2.723	1.279	4.123	1.001
0.223	1.709	1.373	1.512	2.773	1.286	4.173	1.008
0.323	1.667	1.423	1.499	2.823	1.251	4.223	1.000
0.373	1.686	1.473	1.498	2.873	1.251	4.273	1.017
0.423	1.660	1.573	1.473	2.923	1.217	4.323	1.001

## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.473	1.663	1.623	1.479	2.973	1.220	4.373	1.011
0.523	1.646	1.673	1.463	3.073	1.164	4.423	1.000
0.573	1.645	1.723	1.459	3.123	1.170	4.473	1.011
0.623	1.630	1.773	1.447	3.173	1.131	4.573	0.994
0.673	1.624	1.823	1.448	3.223	1.130	4.623	1.006
0.723	1.615	1.873	1.431	3.273	1.098	4.673	0.995
0.773	1.610	1.923	1.428	3.323	1.098	4.723	1.002
0.773	1.614	1.973	1.418	3.373	1.070	4.773	0.995
0.823	1.598	2.023	1.412	3.423	1.066	4.823	1.000
0.873	1.601	2.073	1.404	3.473	1.047	4.873	0.995
0.873	1.601	2.123	1.404	3.523	1.042	4.923	0.999
0.923	1.594	2.223	1.385	3.573	1.028	4.973	0.997
0.973	1.577	2.273	1.383	3.623	1.027	5.023	1.000
0.973	1.580	2.373	1.369	3.723	1.017	5.073	0.997
1.073	1.559	2.423	1.351	3.773	1.013	5.123	1.004
1.123	1.555	2.473	1.349	3.873	1.012	5.223	1.003

NOMINAL SHOCK GENERATOR ANGLE=10 DEGREES

FIF G = 9.72 DEGREES  
ALFA G = 9.97 DEGREESX=5.599 INCHES  
YGS=2.030 INCHES

P2 BAR=2.020

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.047	1.977	1.147	1.711	2.497	1.471	3.797	1.036
0.147	1.966	1.197	1.694	2.547	1.454	3.897	1.020
0.197	1.977	1.247	1.679	2.597	1.459	3.947	1.009
0.247	1.945	1.297	1.669	2.647	1.433	3.997	1.013
0.297	1.938	1.397	1.624	2.697	1.433	4.047	1.004
0.347	1.923	1.447	1.634	2.747	1.407	4.097	1.018
0.397	1.910	1.497	1.600	2.797	1.412	4.147	1.003
0.447	1.896	1.547	1.598	2.897	1.365	4.197	1.011
0.497	1.880	1.597	1.575	2.947	1.370	4.247	1.001
0.547	1.871	1.647	1.577	2.997	1.336	4.297	1.011
0.597	1.857	1.697	1.560	3.047	1.335	4.397	0.996
0.597	1.869	1.747	1.551	3.097	1.299	4.447	1.007
0.647	1.840	1.797	1.549	3.147	1.298	4.497	0.996
0.697	1.839	1.847	1.533	3.197	1.259	4.547	1.003
0.697	1.849	1.897	1.535	3.247	1.249	4.597	0.995
0.747	1.825	1.947	1.528	3.297	1.211	4.647	1.001
0.797	1.801	2.047	1.513	3.347	1.201	4.697	0.994
0.797	1.814	2.097	1.517	3.397	1.158	4.747	1.000
0.897	1.780	2.197	1.508	3.447	1.155	4.797	0.997
0.947	1.776	2.247	1.495	3.547	1.107	4.847	1.000
0.997	1.752	2.297	1.495	3.597	1.089	4.897	0.997
1.047	1.743	2.397	1.480	3.697	1.062	4.947	1.002
1.097	1.727	2.447	1.475	3.747	1.034	5.047	1.001



## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE=12 DEGREES

FIF G =11.78 DEGRFES  
ALFA G=12.02 DEGRFESX=5.604 INCHES  
YGS=2.090 INCHES

P2 BAR=2.304

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.021	2.230	1.071	1.915	2.421	1.596	3.771	1.137
0.071	2.280	1.121	1.902	2.471	1.581	3.821	1.137
0.121	2.276	1.221	1.837	2.521	1.578	3.871	1.078
0.171	2.265	1.271	1.850	2.571	1.567	3.921	1.089
0.221	2.250	1.321	1.791	2.621	1.567	3.971	1.039
0.271	2.226	1.371	1.788	2.721	1.542	4.021	1.045
0.321	2.199	1.421	1.743	2.771	1.542	4.071	1.017
0.371	2.195	1.471	1.740	2.821	1.526	4.121	1.025
0.421	2.170	1.521	1.698	2.871	1.524	4.221	1.000
0.471	2.188	1.571	1.683	2.921	1.508	4.271	1.011
0.471	2.158	1.621	1.659	2.971	1.507	4.321	0.999
0.521	2.155	1.671	1.640	3.021	1.484	4.371	1.005
0.521	2.160	1.721	1.628	3.071	1.482	4.421	0.997
0.571	2.135	1.771	1.621	3.121	1.460	4.471	1.001
0.621	2.095	1.871	1.594	3.171	1.454	4.521	0.996
0.671	2.112	1.921	1.606	3.221	1.428	4.571	1.000
0.721	2.064	2.021	1.608	3.271	1.419	4.621	0.998
0.771	2.050	2.071	1.604	3.371	1.378	4.671	0.999
0.821	2.021	2.121	1.605	3.421	1.360	4.721	0.998
0.871	2.003	2.221	1.602	3.521	1.322	4.771	1.002
0.921	1.984	2.271	1.603	3.571	1.266	4.871	1.000
0.971	1.964	2.321	1.602	3.621	1.265		
1.021	1.940	2.371	1.594	3.721	1.201		

NOMINAL SHOCK GENERATOR ANGLE=13 DEGREES

FIF G =12.81 DEGRFES  
ALFA G=13.04 DEGRFESX=5.606 INCHES  
YGS=2.102 INCHES

P2 BAR=2.455

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.032	2.401	0.982	2.064	2.232	1.646	3.432	1.459
0.082	2.438	1.032	2.047	2.282	1.646	3.482	1.421
0.132	2.433	1.132	1.971	2.332	1.652	3.532	1.425
0.182	2.423	1.182	1.988	2.382	1.640	3.632	1.379
0.232	2.394	1.232	1.927	2.432	1.639	3.682	1.324
0.282	2.390	1.282	1.917	2.482	1.629	3.732	1.326
0.332	2.359	1.332	1.871	2.532	1.633	3.782	1.260
0.382	2.377	1.382	1.857	2.632	1.608	3.832	1.266
0.382	2.355	1.432	1.805	2.682	1.616	3.882	1.185
0.432	2.343	1.482	1.787	2.732	1.597	3.932	1.186
0.432	2.351	1.532	1.743	2.782	1.600	3.982	1.109
0.482	2.328	1.582	1.724	2.832	1.583	4.032	1.116
0.532	2.283	1.632	1.692	2.882	1.584	4.132	1.032

## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.532	2.297	1.682	1.690	2.932	1.571	4.182	1.048
0.632	2.238	1.782	1.637	2.982	1.565	4.232	1.011
0.682	2.230	1.832	1.639	3.032	1.558	4.282	1.019
0.732	2.190	1.932	1.632	3.082	1.545	4.332	1.003
0.782	2.162	1.982	1.630	3.132	1.534	4.382	1.010
0.832	2.139	2.032	1.628	3.182	1.526	4.432	1.002
0.882	2.109	2.132	1.634	3.282	1.498	4.482	1.007
0.932	2.087	2.182	1.650	3.332	1.479		

NOMINAL SHOCK GENERATOR ANGLE=14 DEGREES

FIF G =13.80 DEGRFES  
ALFA G=14.13 DEGRFESX=5.607 INCHES  
YGS=2.138 INCHES

P2 BAR=2.624

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.046	2.644	0.746	2.308	1.296	1.963	1.996	1.664
0.096	2.617	0.746	2.310	1.346	1.929	1.996	1.656
0.146	2.635	0.796	2.278	1.396	1.884	2.046	1.673
0.196	2.615	0.846	2.258	1.446	1.864	2.096	1.671
0.246	2.556	0.846	2.267	1.546	1.774	2.096	1.662
0.346	2.556	0.896	2.221	1.596	1.778	2.146	1.666
0.396	2.521	0.946	2.174	1.646	1.774	2.196	1.668
0.446	2.496	0.946	2.205	1.696	1.720	2.196	1.669
0.496	2.468	1.046	2.136	1.746	1.692	2.296	1.673
0.546	2.442	1.096	2.103	1.796	1.686	2.346	1.689
0.596	2.405	1.146	2.087	1.846	1.674	2.396	1.682
0.646	2.365	1.196	2.034	1.896	1.664	2.446	1.692
0.696	2.342	1.246	2.039	1.946	1.669	2.496	1.693



## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE= 2 DEGREES

FIF G = 1.62 DEGREES

X=7.070 INCHES

P2 BAR=1.162

ALFA G= 2.00 DEGREES

YGS=2.571 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.026	1.144	1.526	1.116	3.126	1.058	4.426	1.009
0.126	1.145	1.626	1.134	3.176	1.055	4.476	1.016
0.176	1.130	1.676	1.131	3.226	1.058	4.476	1.008
0.226	1.149	1.726	1.138	3.276	1.051	4.526	1.009
0.276	1.133	1.776	1.130	3.326	1.049	4.576	1.011
0.326	1.143	1.826	1.132	3.376	1.045	4.626	1.007
0.376	1.131	1.876	1.126	3.426	1.039	4.676	1.008
0.426	1.141	1.926	1.124	3.476	1.041	4.726	1.006
0.476	1.131	1.976	1.127	3.526	1.032	4.776	1.008
0.526	1.141	2.026	1.121	3.576	1.034	4.826	1.004
0.576	1.128	2.076	1.123	3.626	1.029	4.876	1.008
0.626	1.137	2.126	1.119	3.676	1.038	4.926	1.011
0.676	1.135	2.176	1.130	3.776	1.024	5.026	1.006
0.776	1.134	2.276	1.116	3.826	1.027	5.076	1.007
0.826	1.130	2.326	1.120	3.876	1.022	5.126	1.008
0.876	1.137	2.376	1.116	3.926	1.017	5.176	1.002
0.926	1.125	2.426	1.112	4.026	1.017	5.276	1.005
1.026	1.126	2.526	1.110	4.076	1.014	5.326	1.010
1.076	1.133	2.576	1.103	4.126	1.010	5.376	1.000
1.126	1.120	2.626	1.101	4.176	1.013	5.426	1.013
1.176	1.132	2.676	1.098	4.226	1.023	5.476	1.015
1.226	1.135	2.776	1.094	4.276	1.013	5.526	1.013
1.276	1.132	2.826	1.096	4.276	1.014	5.576	1.010
1.326	1.126	2.876	1.085	4.326	1.013	5.626	1.012
1.376	1.130	2.926	1.088	4.376	1.009	5.676	1.008
1.426	1.123	2.976	1.082	4.376	1.012	5.726	1.013
1.476	1.130	3.026	1.064	4.426	1.008		

NOMINAL SHOCK GENERATOR ANGLE = 4 DEGREES

FIF G = 3.73 DEGREES

X=7.079 INCHES

P2 BAR=1.348

ALFA G= 4.05 DEGREES

YGS=2.538 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.048	1.308	1.498	1.277	2.998	1.149	4.248	1.014
0.098	1.331	1.548	1.273	3.048	1.142	4.248	1.020
0.148	1.320	1.598	1.271	3.098	1.133	4.298	1.018
0.198	1.326	1.648	1.267	3.148	1.125	4.348	1.016
0.248	1.321	1.698	1.264	3.198	1.116	4.398	1.012
0.298	1.323	1.748	1.265	3.248	1.114	4.448	1.010
0.348	1.311	1.798	1.260	3.298	1.100	4.498	1.009
0.398	1.315	1.848	1.260	3.348	1.100	4.548	1.008
0.448	1.317	1.898	1.254	3.398	1.093	4.598	1.005

## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.548	1.304	1.948	1.265	3.448	1.094	4.648	1.004
0.598	1.301	2.048	1.247	3.548	1.065	4.698	1.010
0.648	1.302	2.098	1.251	3.598	1.072	4.798	1.001
0.698	1.289	2.148	1.243	3.648	1.059	4.848	1.006
0.798	1.291	2.198	1.240	3.698	1.054	4.898	1.006
0.848	1.291	2.298	1.238	3.798	1.046	4.948	1.002
0.898	1.281	2.348	1.228	3.848	1.037	5.048	1.004
0.948	1.289	2.398	1.224	3.898	1.033	5.098	1.009
0.998	1.297	2.448	1.221	3.948	1.029	5.148	1.000
1.048	1.286	2.548	1.211	3.998	1.041	5.198	1.010
1.098	1.281	2.598	1.213	4.048	1.022	5.248	1.015
1.148	1.279	2.648	1.199	4.048	1.024	5.298	1.011
1.198	1.274	2.698	1.200	4.098	1.027	5.348	1.007
1.248	1.277	2.748	1.191	4.148	1.017	5.398	1.008
1.298	1.284	2.798	1.173	4.148	1.020	5.448	1.005
1.398	1.278	2.898	1.158	4.198	1.019	5.498	1.010
1.448	1.275	2.948	1.155	4.198	1.019		

NOMINAL SHOCK GENERATOR ANGLE = 6 DEGREES

FIF G = 5.64 DEGREES  
ALFA G = 6.15 DEGREESX=7.087 INCHES  
YGS=2.539 INCHES

P2 BAR=1.564

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.040	1.484	1.440	1.412	2.890	1.260	4.040	1.047
0.090	1.525	1.490	1.406	2.940	1.253	4.090	1.043
0.140	1.510	1.540	1.406	2.990	1.240	4.140	1.032
0.190	1.514	1.590	1.398	3.040	1.237	4.190	1.030
0.240	1.523	1.640	1.397	3.090	1.222	4.240	1.020
0.340	1.497	1.690	1.389	3.140	1.217	4.290	1.021
0.390	1.498	1.740	1.401	3.190	1.198	4.340	1.014
0.440	1.493	1.840	1.379	3.240	1.206	4.390	1.014
0.490	1.478	1.890	1.384	3.340	1.167	4.440	1.009
0.590	1.471	1.940	1.373	3.390	1.170	4.490	1.017
0.640	1.474	1.990	1.372	3.440	1.146	4.590	1.006
0.690	1.451	2.090	1.367	3.490	1.144	4.640	1.009
0.740	1.463	2.140	1.354	3.590	1.124	4.690	1.007
0.790	1.470	2.190	1.353	3.640	1.103	4.740	1.003
0.840	1.455	2.240	1.344	3.690	1.097	4.840	1.004
0.890	1.446	2.340	1.336	3.740	1.085	4.890	1.007
0.940	1.442	2.390	1.338	3.790	1.093	4.940	1.000
0.990	1.441	2.440	1.326	3.840	1.068	4.990	1.008
1.040	1.436	2.490	1.327	3.840	1.068	5.040	1.016
1.090	1.438	2.540	1.317	3.890	1.067	5.090	1.009
1.190	1.435	2.590	1.303	3.940	1.055	5.140	1.008
1.240	1.432	2.690	1.285	3.940	1.051	5.190	1.007
1.290	1.430	2.740	1.281	3.990	1.052	5.240	1.006
1.340	1.425	2.790	1.275	3.990	1.055	5.290	1.010
1.390	1.419	2.840	1.271	4.040	1.039		



## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
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NOMINAL SHOCK GENERATOR ANGLE = 8 DEGREES

FIE G = 7.63 DEGRFES

X=7.093 INCHES

P2 BAR=1.775

ALFA G= 8.01 DEGRFES

YGS=2.539 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.072	1.718	1.372	1.573	2.772	1.389	3.872	1.147
0.122	1.763	1.422	1.568	2.822	1.392	3.922	1.119
0.172	1.750	1.472	1.555	2.872	1.376	3.972	1.115
0.222	1.758	1.522	1.567	2.922	1.375	4.022	1.087
0.272	1.728	1.622	1.537	2.972	1.360	4.072	1.088
0.372	1.715	1.672	1.536	3.022	1.366	4.122	1.061
0.422	1.713	1.722	1.527	3.122	1.334	4.172	1.063
0.472	1.682	1.772	1.518	3.172	1.333	4.222	1.039
0.522	1.694	1.872	1.509	3.222	1.314	4.272	1.051
0.572	1.707	1.922	1.496	3.272	1.305	4.372	1.021
0.622	1.679	1.972	1.490	3.372	1.284	4.422	1.027
0.672	1.667	2.022	1.481	3.422	1.257	4.472	1.017
0.722	1.659	2.122	1.467	3.472	1.252	4.522	1.013
0.772	1.662	2.172	1.472	3.522	1.231	4.622	1.010
0.822	1.651	2.222	1.454	3.572	1.239	4.672	1.010
0.872	1.643	2.272	1.458	3.622	1.205	4.722	1.002
0.972	1.640	2.322	1.447	3.622	1.204	4.772	1.011
1.022	1.632	2.372	1.441	3.672	1.210	4.822	1.017
1.072	1.636	2.472	1.423	3.722	1.174	4.872	1.012
1.122	1.620	2.522	1.420	3.722	1.174	4.922	1.008
1.172	1.616	2.572	1.417	3.772	1.173	4.972	1.012
1.222	1.599	2.622	1.414	3.772	1.166	5.022	1.006
1.272	1.591	2.672	1.403	3.822	1.147	5.072	1.013
1.322	1.584	2.722	1.401	3.822	1.151		

NOMINAL SHOCK GENERATOR ANGLE=10 DEGREES

FIE G = 9.72 DEGRFES

X=7.099 INCHES

P2 BAR=2.033

ALFA G=10.06 DEGREES

YGS=2.580 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.040	1.967	1.290	1.795	2.640	1.523	3.690	1.335
0.140	2.025	1.390	1.751	2.690	1.518	3.740	1.323
0.190	2.038	1.440	1.746	2.740	1.508	3.790	1.296
0.240	1.991	1.490	1.723	2.790	1.518	3.840	1.293
0.290	2.014	1.540	1.712	2.890	1.491	3.890	1.258
0.340	2.031	1.640	1.689	2.940	1.497	3.940	1.256
0.390	1.987	1.690	1.664	2.990	1.480	3.990	1.213
0.440	1.965	1.740	1.650	3.040	1.480	4.040	1.225
0.490	1.954	1.790	1.637	3.140	1.467	4.140	1.156
0.540	1.964	1.890	1.615	3.190	1.450	4.190	1.161
0.590	1.934	1.940	1.611	3.240	1.441	4.240	1.118

## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.640	1.925	1.990	1.592	3.290	1.434	4.290	1.115
0.740	1.911	2.040	1.595	3.340	1.437	4.390	1.080
0.790	1.901	2.090	1.579	3.390	1.413	4.440	1.052
0.840	1.900	2.140	1.559	3.390	1.409	4.490	1.048
0.890	1.883	2.240	1.546	3.440	1.406	4.540	1.034
0.940	1.871	2.290	1.547	3.490	1.387	4.590	1.040
0.990	1.848	2.340	1.546	3.490	1.385	4.640	1.023
1.040	1.839	2.390	1.544	3.540	1.379	4.690	1.020
1.090	1.827	2.440	1.540	3.540	1.374	4.740	1.014
1.140	1.814	2.490	1.533	3.590	1.363	4.790	1.011
1.190	1.800	2.540	1.531	3.590	1.365	4.840	1.011
1.240	1.786	2.590	1.528	3.640	1.354		

NOMINAL SHOCK GENERATOR ANGLE=12 DEGREES

FIF G =11.78 DEGREES

X=7.104 INCHES

P2 BAR=2.322

ALFA G=12.14 DEGREES

YGS=2.655 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.059	2.329	1.059	2.107	2.209	1.627	3.209	1.577
0.109	2.360	1.159	2.039	2.259	1.617	3.259	1.562
0.159	2.346	1.209	2.038	2.309	1.615	3.259	1.555
0.209	2.321	1.259	2.007	2.359	1.611	3.309	1.558
0.259	2.321	1.309	1.989	2.409	1.610	3.309	1.546
0.309	2.339	1.409	1.955	2.459	1.610	3.359	1.547
0.359	2.298	1.459	1.919	2.509	1.612	3.359	1.544
0.409	2.290	1.509	1.896	2.559	1.625	3.409	1.537
0.509	2.276	1.559	1.872	2.659	1.619	3.459	1.527
0.559	2.263	1.659	1.824	2.709	1.618	3.509	1.518
0.609	2.261	1.709	1.814	2.759	1.618	3.559	1.510
0.659	2.235	1.759	1.774	2.809	1.612	3.609	1.505
0.709	2.218	1.809	1.787	2.909	1.608	3.659	1.495
0.759	2.183	1.859	1.742	2.959	1.598	3.709	1.484
0.809	2.167	1.909	1.693	3.009	1.593	3.759	1.477
0.859	2.151	2.009	1.657	3.059	1.586	3.809	1.477
0.909	2.132	2.059	1.653	3.109	1.601	3.909	1.451
0.959	2.112	2.109	1.643	3.159	1.576	3.959	1.443
1.009	2.089	2.159	1.638	3.159	1.571		



## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE=13 DEGREES

FIF G =12.81 DEGREES X=7.106 INCHES P2 BAR=2.473  
 ALFA G=13.16 DEGREES YGS=2.673 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.041	2.483	0.641	2.392	1.291	2.129	1.941	1.736
0.091	2.458	0.691	2.379	1.341	2.085	1.991	1.720
0.141	2.496	0.741	2.356	1.391	2.064	2.041	1.702
0.191	2.520	0.791	2.336	1.441	2.035	2.091	1.684
0.241	2.505	0.841	2.308	1.541	1.983	2.141	1.662
0.291	2.481	0.891	2.284	1.591	1.968	2.191	1.657
0.391	2.493	0.941	2.295	1.641	1.920	2.241	1.645
0.441	2.474	1.041	2.226	1.691	1.930	2.291	1.644
0.491	2.487	1.091	2.219	1.741	1.870	2.341	1.634
0.541	2.452	1.141	2.185	1.791	1.795	2.391	1.639
0.591	2.439	1.191	2.166	1.891	1.747	2.441	1.646

NOMINAL SHOCK GENERATOR ANGLE=14 DEGREES

FIF G =13.80 DEGREES X=7.107 INCHES P2 BAR=2.624  
 ALFA G=14.13 DEGREES YGS=2.709 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.028	2.640	0.428	2.644	0.928	2.431	1.328	2.237
0.078	2.629	0.478	2.623	0.978	2.386	1.378	2.185
0.128	2.669	0.528	2.612	1.028	2.368	1.428	2.138
0.178	2.661	0.578	2.619	1.078	2.336	1.528	2.069
0.228	2.669	0.678	2.550	1.128	2.358	1.578	2.053
0.278	2.654	0.728	2.537	1.178	2.288	1.628	2.012
0.328	2.650	0.778	2.503	1.228	2.276	1.678	2.004
0.378	2.655	0.828	2.479	1.278	2.231	1.728	1.965

NOMINAL SHOCK GENERATOR ANGLE = 2 DEGREES

FIF G = 1.62 DEGREES X=7.570 INCHES P2 BAR=1.162  
 ALFA G= 2.00 DEGREES YGS=2.753 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.011	1.167	1.511	1.127	3.011	1.071	4.411	1.014
0.061	1.148	1.561	1.129	3.061	1.071	4.411	1.006
0.161	1.132	1.661	1.124	3.161	1.058	4.461	1.006
0.261	1.135	1.761	1.127	3.261	1.054	4.511	1.007
0.311	1.144	1.811	1.126	3.311	1.056	4.561	1.010
0.361	1.128	1.861	1.124	3.361	1.045	4.611	1.005
0.411	1.143	1.911	1.127	3.411	1.050	4.661	1.011
0.461	1.129	1.961	1.124	3.461	1.042	4.711	1.006
0.511	1.137	2.011	1.120	3.511	1.040	4.761	1.008
0.561	1.128	2.061	1.122	3.561	1.039	4.811	1.007

## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.611	1.136	2.111	1.121	3.611	1.036	4.861	1.010
0.661	1.123	2.161	1.118	3.661	1.032	4.911	1.005
0.761	1.132	2.261	1.119	3.761	1.030	5.011	1.009
0.811	1.122	2.311	1.114	3.811	1.025	5.061	1.005
0.861	1.134	2.361	1.120	3.861	1.028	5.111	1.011
0.911	1.122	2.411	1.112	3.911	1.022	5.161	1.005
0.961	1.129	2.461	1.111	3.961	1.021	5.211	1.006
1.011	1.118	2.511	1.105	4.011	1.016	5.261	1.002
1.061	1.128	2.561	1.106	4.061	1.019	5.311	1.007
1.111	1.118	2.611	1.101	4.111	1.016	5.361	1.006
1.161	1.125	2.661	1.099	4.161	1.014	5.411	1.009
1.261	1.128	2.761	1.101	4.211	1.014	5.511	1.015
1.361	1.120	2.861	1.089	4.261	1.018	5.611	1.007
1.411	1.119	2.911	1.091	4.261	1.015	5.661	1.011
1.461	1.121	2.961	1.086	4.311	1.011	5.711	1.009
1.461	1.131	2.961	1.079	4.361	1.007		

NOMINAL SHOCK GENERATOR ANGLE= 4 DEGREES

FIF G = 3.73 DEGREES  
ALFA G = 4.05 DEGREESX=7.579 INCHES  
YGS=2.717 INCHES

P2 BAR=1.348

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.015	1.337	1.415	1.276	2.815	1.186	4.165	1.024
0.065	1.323	1.515	1.277	2.915	1.169	4.165	1.035
0.115	1.321	1.565	1.277	3.015	1.160	4.215	1.025
0.165	1.327	1.615	1.271	3.065	1.162	4.265	1.024
0.215	1.321	1.665	1.271	3.115	1.144	4.315	1.025
0.265	1.318	1.715	1.270	3.165	1.149	4.365	1.018
0.315	1.314	1.765	1.262	3.215	1.133	4.415	1.020
0.365	1.318	1.815	1.266	3.265	1.131	4.465	1.016
0.415	1.306	1.865	1.263	3.315	1.120	4.515	1.013
0.515	1.314	1.915	1.259	3.365	1.120	4.565	1.014
0.565	1.299	2.015	1.258	3.415	1.104	4.615	1.011
0.615	1.312	2.065	1.252	3.515	1.103	4.665	1.009
0.665	1.296	2.115	1.254	3.565	1.087	4.765	1.009
0.715	1.299	2.165	1.248	3.615	1.092	4.815	1.005
0.765	1.285	2.215	1.242	3.665	1.076	4.865	1.012
0.815	1.293	2.265	1.237	3.715	1.075	4.915	1.005
0.865	1.285	2.315	1.234	3.765	1.061	4.965	1.008
0.915	1.289	2.365	1.231	3.815	1.063	5.015	1.002
1.015	1.293	2.415	1.226	3.865	1.049	5.065	1.009
1.115	1.283	2.515	1.228	3.915	1.051	5.115	1.006
1.165	1.279	2.615	1.215	3.965	1.046	5.165	1.008
1.215	1.279	2.665	1.215	4.015	1.046	5.265	1.011
1.215	1.291	2.715	1.197	4.015	1.040	5.365	1.005
1.265	1.290	2.715	1.207	4.065	1.036	5.415	1.009
1.315	1.285	2.765	1.190	4.115	1.031	5.465	1.007



## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE = 6 DEGREES

FIF G = 5.64 DEGRFES  
ALFA G= 6.15 DEGREESX=7.587 INCHES  
YGS=2.718 INCHES

P2 BAR=1.564

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.041	1.533	1.441	1.430	2.841	1.294	3.991	1.085
0.091	1.518	1.491	1.421	2.891	1.275	4.041	1.071
0.141	1.525	1.541	1.417	2.941	1.280	4.091	1.073
0.191	1.505	1.591	1.413	2.991	1.264	4.141	1.054
0.291	1.509	1.641	1.410	3.041	1.264	4.191	1.059
0.341	1.491	1.691	1.405	3.091	1.250	4.241	1.043
0.391	1.501	1.791	1.398	3.141	1.251	4.291	1.042
0.441	1.484	1.841	1.393	3.191	1.231	4.341	1.034
0.491	1.487	1.891	1.390	3.291	1.227	4.391	1.034
0.541	1.463	1.941	1.386	3.341	1.205	4.441	1.023
0.591	1.484	1.991	1.376	3.391	1.209	4.541	1.023
0.641	1.461	2.041	1.372	3.441	1.185	4.591	1.015
0.691	1.473	2.091	1.371	3.491	1.184	4.641	1.019
0.791	1.470	2.141	1.362	3.541	1.160	4.691	1.011
0.891	1.451	2.191	1.361	3.591	1.164	4.741	1.011
0.941	1.447	2.291	1.359	3.641	1.140	4.791	1.005
0.991	1.448	2.391	1.343	3.691	1.143	4.841	1.009
0.991	1.460	2.441	1.344	3.741	1.124	4.891	1.006
1.041	1.453	2.491	1.326	3.791	1.110	4.941	1.008
1.091	1.450	2.491	1.333	3.791	1.128	5.041	1.012
1.191	1.436	2.541	1.322	3.841	1.105	5.141	1.006
1.291	1.436	2.591	1.315	3.891	1.102	5.191	1.008
1.341	1.434	2.691	1.300	3.941	1.104	5.241	1.007
1.391	1.426	2.791	1.290	3.941	1.083		

NOMINAL SHOCK GENERATOR ANGLE = 8 DEGREES

FIF G = 7.63 DEGRFES  
ALFA G= 8.01 DEGRFESX=7.593 INCHES  
YGS=2.718 INCHES

P2 BAR=1.775

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.055	1.766	1.355	1.593	2.705	1.423	3.805	1.210
0.105	1.753	1.405	1.596	2.755	1.417	3.855	1.217
0.155	1.764	1.455	1.578	2.805	1.409	3.905	1.180
0.205	1.734	1.555	1.574	2.855	1.406	3.955	1.189
0.255	1.738	1.605	1.557	2.905	1.404	4.005	1.155
0.305	1.711	1.655	1.557	2.955	1.387	4.055	1.157
0.355	1.726	1.705	1.544	3.055	1.388	4.105	1.127
0.405	1.704	1.755	1.536	3.105	1.365	4.155	1.130
0.455	1.708	1.805	1.523	3.155	1.373	4.205	1.096
0.555	1.711	1.855	1.525	3.205	1.350	4.305	1.092
0.655	1.684	1.905	1.511	3.255	1.352	4.355	1.062
0.705	1.675	1.955	1.509	3.305	1.329	4.405	1.069

## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.755	1.674	2.055	1.503	3.355	1.333	4.455	1.045
0.755	1.680	2.155	1.484	3.405	1.306	4.505	1.046
0.805	1.672	2.205	1.486	3.455	1.310	4.555	1.028
0.855	1.667	2.255	1.466	3.505	1.287	4.605	1.031
0.955	1.644	2.255	1.471	3.555	1.293	4.655	1.020
1.055	1.639	2.305	1.460	3.555	1.269	4.705	1.022
1.105	1.636	2.355	1.456	3.605	1.263	4.805	1.021
1.155	1.621	2.455	1.440	3.655	1.262	4.905	1.010
1.205	1.624	2.555	1.436	3.705	1.258	4.955	1.016
1.255	1.610	2.605	1.435	3.705	1.234	5.005	1.009
1.305	1.606	2.655	1.425	3.755	1.238		

NOMINAL SHOCK GENERATOR ANGLE=10 DEGREES

FIF G = 9.72 DEGRFES

X=7.599 INCHES

P2 BAR=2.033

ALFA G=10.06 DEGRFES

YGS=2.762 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.055	2.058	1.355	1.788	2.605	1.546	3.655	1.396
0.105	2.055	1.405	1.788	2.655	1.534	3.705	1.402
0.155	2.017	1.455	1.764	2.705	1.536	3.755	1.376
0.205	2.027	1.505	1.755	2.805	1.529	3.805	1.376
0.305	2.032	1.555	1.725	2.855	1.524	3.855	1.349
0.405	1.996	1.605	1.732	2.905	1.523	3.905	1.353
0.455	1.984	1.655	1.697	2.955	1.514	3.955	1.312
0.505	1.982	1.705	1.699	3.005	1.511	4.055	1.310
0.505	1.994	1.805	1.677	3.055	1.500	4.105	1.263
0.555	1.978	1.905	1.641	3.105	1.502	4.155	1.276
0.605	1.975	1.955	1.640	3.155	1.487	4.205	1.227
0.705	1.936	2.005	1.618	3.205	1.485	4.255	1.232
0.805	1.926	2.005	1.603	3.255	1.465	4.305	1.183
0.855	1.920	2.055	1.588	3.305	1.473	4.355	1.192
0.905	1.893	2.105	1.586	3.305	1.458	4.405	1.141
0.955	1.895	2.205	1.566	3.355	1.451	4.455	1.150
1.005	1.875	2.305	1.560	3.405	1.452	4.555	1.118
1.055	1.864	2.355	1.561	3.455	1.431	4.655	1.079
1.105	1.848	2.405	1.552	3.455	1.457	4.705	1.080
1.155	1.843	2.455	1.554	3.505	1.438	4.755	1.054
1.205	1.823	2.505	1.550	3.555	1.419		
1.305	1.811	2.555	1.542	3.605	1.422		



## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE=12 DEGREES

FIF G =11.78 DEGRFES

X=7.604 INCHES

P2 BAR=2.322

ALFA G=12.14 DEGRFES

YGS=2.842 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.054	2.329	0.754	2.223	1.404	1.977	2.154	1.657
0.154	2.343	0.804	2.217	1.454	1.979	2.204	1.654
0.204	2.322	0.854	2.183	1.554	1.953	2.254	1.637
0.254	2.324	0.904	2.184	1.654	1.899	2.304	1.633
0.254	2.338	0.954	2.146	1.704	1.879	2.354	1.624
0.304	2.335	1.054	2.137	1.754	1.803	2.404	1.623
0.354	2.338	1.104	2.100	1.754	1.851	2.454	1.619
0.454	2.298	1.154	2.100	1.804	1.774	2.554	1.619
0.554	2.295	1.204	2.071	1.854	1.763	2.604	1.624
0.604	2.284	1.254	2.053	1.954	1.720	2.654	1.623
0.654	2.251	1.304	2.020	2.054	1.692	2.704	1.629
0.704	2.261	1.354	2.021	2.104	1.689		

NOMINAL SHOCK GENERATOR ANGLE=13 DEGREES

FIF G =12.81 DEGRFES

X=7.606 INCHES

P2 BAR=2.473

ALFA G=13.16 DEGRFES

YGS=2.861 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.028	2.436	0.628	2.435	1.228	2.207	1.928	1.794
0.078	2.408	0.678	2.425	1.278	2.147	1.978	1.796
0.128	2.521	0.728	2.390	1.328	2.151	2.028	1.744
0.128	2.537	0.778	2.391	1.428	2.116	2.078	1.742
0.178	2.520	0.828	2.349	1.528	2.055	2.128	1.705
0.228	2.508	0.928	2.334	1.578	2.041	2.178	1.701
0.328	2.467	0.978	2.290	1.628	2.005	2.228	1.679
0.428	2.490	1.028	2.297	1.628	1.951	2.278	1.676
0.478	2.483	1.078	2.252	1.678	1.911	2.328	1.662
0.528	2.454	1.128	2.244	1.728	1.897	2.428	1.660
0.578	2.472	1.178	2.196	1.828	1.834	2.478	1.665

## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE=14 DEGREES

FIF G =13.80 DEGRFES X=7.607 INCHES P2 BAR=2.624  
 ALFA G=14.13 DEGRFES YGS=2.900 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.055	2.668	0.405	2.651	0.805	2.499	1.255	2.319
0.105	2.621	0.455	2.631	0.855	2.522	1.255	2.282
0.155	2.673	0.555	2.628	0.905	2.462	1.305	2.255
0.205	2.686	0.605	2.590	0.955	2.462	1.355	2.217
0.255	2.664	0.655	2.619	1.055	2.427	1.455	2.174
0.305	2.659	0.705	2.561	1.155	2.363		
0.355	2.651	0.755	2.561	1.205	2.355		

NOMINAL SHOCK GENERATOR ANGLE= 2 DEGREES

FIF G = 1.62 DEGRFES X=8.070 INCHES P2 BAR=1.162  
 ALFA G= 2.00 DEGRFES YGS=2.935 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.047	1.130	1.547	1.139	3.047	1.084	4.347	1.024
0.097	1.141	1.597	1.136	3.097	1.080	4.397	1.017
0.147	1.138	1.647	1.132	3.147	1.075	4.397	1.024
0.247	1.139	1.747	1.128	3.247	1.072	4.497	1.016
0.297	1.152	1.797	1.135	3.297	1.072	4.547	1.023
0.347	1.138	1.847	1.126	3.347	1.067	4.597	1.014
0.397	1.147	1.897	1.129	3.397	1.062	4.647	1.020
0.447	1.137	1.947	1.128	3.447	1.064	4.697	1.015
0.497	1.146	1.997	1.126	3.497	1.056	4.747	1.020
0.547	1.133	2.047	1.126	3.547	1.059	4.797	1.015
0.597	1.141	2.097	1.120	3.597	1.049	4.847	1.017
0.647	1.135	2.147	1.126	3.647	1.053	4.897	1.015
0.747	1.130	2.247	1.113	3.747	1.038	4.997	1.009
0.797	1.133	2.297	1.122	3.797	1.044	5.047	1.015
0.847	1.132	2.347	1.118	3.847	1.037	5.097	1.012
0.897	1.129	2.397	1.117	3.897	1.037	5.147	1.013
0.947	1.132	2.447	1.117	3.947	1.031	5.197	1.013
0.997	1.128	2.497	1.113	3.997	1.033	5.247	1.013
1.047	1.133	2.547	1.112	4.047	1.028	5.297	1.014
1.097	1.120	2.597	1.106	4.097	1.025	5.347	1.008
1.147	1.135	2.647	1.107	4.147	1.027	5.397	1.016
1.197	1.116	2.697	1.099	4.197	1.020	5.447	1.004
1.247	1.131	2.747	1.100	4.197	1.023	5.497	1.016
1.297	1.124	2.797	1.105	4.247	1.025	5.547	1.011
1.397	1.126	2.897	1.104	4.297	1.025	5.647	1.016
1.447	1.142	2.947	1.090	4.297	1.022		



## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE = 4 DEGREES

FIF G = 3.73 DEGREES  
ALFA G = 4.05 DEGREESX=8.079 INCHES  
YGS=2.896 INCHES

P2 BAR=1.348

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.032	1.325	1.482	1.286	2.882	1.201	4.132	1.062
0.082	1.295	1.532	1.294	2.982	1.191	4.132	1.055
0.132	1.328	1.582	1.285	3.032	1.190	4.232	1.045
0.182	1.318	1.632	1.287	3.082	1.181	4.282	1.046
0.232	1.330	1.682	1.283	3.132	1.176	4.332	1.037
0.282	1.320	1.732	1.282	3.182	1.173	4.382	1.036
0.332	1.326	1.782	1.278	3.232	1.164	4.432	1.036
0.382	1.322	1.832	1.273	3.282	1.162	4.482	1.033
0.432	1.307	1.882	1.275	3.332	1.149	4.532	1.032
0.482	1.313	1.932	1.255	3.382	1.151	4.582	1.028
0.532	1.309	1.982	1.269	3.432	1.125	4.632	1.028
0.582	1.304	2.032	1.256	3.482	1.134	4.682	1.017
0.632	1.306	2.082	1.258	3.532	1.116	4.732	1.024
0.682	1.298	2.132	1.252	3.582	1.118	4.782	1.018
0.732	1.304	2.182	1.254	3.632	1.103	4.832	1.017
0.782	1.288	2.232	1.249	3.682	1.105	4.882	1.015
0.832	1.302	2.282	1.242	3.732	1.093	4.932	1.016
0.882	1.282	2.332	1.243	3.782	1.089	4.982	1.014
0.932	1.295	2.382	1.233	3.832	1.082	5.032	1.009
0.982	1.291	2.432	1.231	3.882	1.073	5.082	1.016
1.032	1.292	2.482	1.237	3.932	1.076	5.132	1.005
1.082	1.306	2.532	1.233	3.982	1.069	5.182	1.016
1.132	1.301	2.582	1.216	4.032	1.070	5.232	1.012
1.182	1.298	2.632	1.211	4.082	1.067	5.282	1.017
1.232	1.291	2.682	1.205				

NOMINAL SHOCK GENERATOR ANGLE = 6 DEGREES

FIF G = 5.64 DEGREES  
ALFA G = 6.15 DEGREESX=8.087 INCHES  
YGS=2.898 INCHES

P2 BAR=1.564

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.041	1.453	1.441	1.437	2.841	1.316	3.991	1.130
0.091	1.527	1.491	1.438	2.891	1.315	4.041	1.121
0.141	1.511	1.541	1.430	2.941	1.308	4.091	1.112
0.241	1.515	1.591	1.428	2.991	1.303	4.141	1.100
0.291	1.519	1.641	1.426	3.041	1.298	4.191	1.096
0.341	1.522	1.741	1.408	3.091	1.286	4.241	1.083
0.391	1.507	1.791	1.417	3.141	1.286	4.291	1.080
0.441	1.509	1.841	1.405	3.241	1.260	4.341	1.067
0.491	1.494	1.891	1.404	3.291	1.268	4.391	1.066
0.541	1.493	1.941	1.395	3.341	1.247	4.441	1.044
0.591	1.473	1.991	1.395	3.391	1.248	4.491	1.051

## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.641	1.486	2.041	1.388	3.441	1.231	4.591	1.039
0.691	1.460	2.091	1.382	3.491	1.229	4.641	1.037
0.741	1.477	2.141	1.380	3.541	1.215	4.691	1.031
0.791	1.471	2.191	1.370	3.591	1.205	4.741	1.030
0.891	1.463	2.241	1.368	3.641	1.197	4.791	1.023
0.941	1.482	2.291	1.372	3.691	1.185	4.841	1.019
1.041	1.474	2.391	1.367	3.691	1.183	4.891	1.020
1.091	1.471	2.441	1.348	3.741	1.176	4.941	1.011
1.141	1.460	2.541	1.341	3.791	1.170	4.991	1.016
1.241	1.450	2.591	1.338	3.791	1.173	5.041	1.015
1.291	1.456	2.641	1.330	3.841	1.158	5.141	1.017
1.341	1.442	2.741	1.323	3.891	1.149		
1.391	1.445	2.791	1.327	3.891	1.157		

NOMINAL SHOCK GENERATOR ANGLE= 8 DEGREES

FIF G = 7.63 DEGREES

X=8.093 INCHES

P2 BAR=1.775

ALFA G= 8.01 DEGREES

YGS=2.897 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.038	1.639	1.338	1.626	2.688	1.455	3.788	1.289
0.088	1.752	1.388	1.621	2.738	1.444	3.838	1.274
0.138	1.729	1.488	1.590	2.788	1.447	3.888	1.259
0.188	1.764	1.538	1.604	2.838	1.435	3.938	1.254
0.238	1.739	1.588	1.583	2.888	1.436	3.988	1.233
0.288	1.757	1.638	1.582	2.988	1.418	4.038	1.228
0.338	1.723	1.688	1.569	3.038	1.422	4.088	1.204
0.388	1.747	1.738	1.565	3.088	1.412	4.138	1.203
0.438	1.709	1.788	1.556	3.138	1.406	4.238	1.160
0.488	1.727	1.838	1.541	3.188	1.398	4.288	1.164
0.538	1.720	1.888	1.541	3.238	1.394	4.338	1.137
0.638	1.698	1.938	1.524	3.288	1.382	4.388	1.130
0.688	1.722	1.988	1.520	3.338	1.375	4.438	1.110
0.788	1.710	2.038	1.522	3.388	1.364	4.488	1.105
0.838	1.700	2.138	1.512	3.438	1.355	4.538	1.087
0.888	1.687	2.188	1.490	3.438	1.356	4.588	1.077
0.988	1.669	2.288	1.484	3.488	1.345	4.638	1.067
1.038	1.676	2.338	1.475	3.538	1.345	4.688	1.053
1.088	1.657	2.388	1.475	3.538	1.341	4.738	1.048
1.138	1.659	2.488	1.467	3.588	1.330	4.788	1.046
1.188	1.647	2.538	1.466	3.638	1.326	4.888	1.036
1.238	1.645	2.588	1.460	3.638	1.319		
1.288	1.631	2.638	1.452	3.738	1.297		



## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE=10 DEGREES

FIF G = 9.72 DEGREES

X=8.099 INCHES

P2 BAR=2.033

ALFA G=10.06 DEGREES

YGS=2.944 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.019	1.967	1.319	1.834	2.569	1.571	3.619	1.467
0.069	1.900	1.369	1.836	2.619	1.566	3.669	1.454
0.119	2.022	1.419	1.811	2.719	1.556	3.719	1.451
0.169	1.974	1.469	1.809	2.769	1.565	3.769	1.439
0.219	2.027	1.519	1.788	2.819	1.549	3.819	1.430
0.269	2.020	1.569	1.769	2.869	1.555	3.869	1.421
0.369	2.007	1.619	1.758	2.919	1.542	3.969	1.394
0.419	2.042	1.669	1.735	2.969	1.546	4.019	1.393
0.519	2.025	1.719	1.725	3.019	1.537	4.069	1.371
0.569	2.025	1.769	1.727	3.069	1.533	4.119	1.362
0.619	1.994	1.869	1.692	3.119	1.528	4.169	1.341
0.719	1.964	1.919	1.658	3.169	1.519	4.219	1.332
0.769	1.974	2.019	1.645	3.169	1.514	4.269	1.310
0.819	1.945	2.069	1.623	3.219	1.517	4.319	1.292
0.869	1.943	2.119	1.623	3.269	1.513	4.369	1.274
0.919	1.929	2.219	1.607	3.269	1.510	4.419	1.256
0.969	1.925	2.269	1.605	3.319	1.502	4.469	1.233
1.019	1.904	2.319	1.594	3.369	1.504	4.519	1.225
1.069	1.899	2.369	1.593	3.369	1.498	4.619	1.187
1.119	1.891	2.419	1.583	3.469	1.482		
1.219	1.850	2.469	1.585	3.519	1.481		
1.269	1.869	2.519	1.571	3.569	1.468		

NOMINAL SHOCK GENERATOR ANGLE=12 DEGREES

FIF G =11.78 DEGREES

X=8.104 INCHES

P2 BAR=2.322

ALFA G=12.14 DEGREES

YGS=3.029 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.100	2.250	0.800	2.252	1.450	2.011	2.200	1.714
0.150	2.330	0.850	2.229	1.500	2.007	2.250	1.691
0.250	2.347	0.950	2.188	1.600	1.952	2.300	1.686
0.300	2.366	1.000	2.198	1.650	1.908	2.350	1.667
0.350	2.326	1.050	2.168	1.750	1.897	2.450	1.650
0.450	2.313	1.100	2.153	1.800	1.858	2.500	1.656
0.500	2.345	1.150	2.137	1.850	1.848	2.550	1.639
0.550	2.302	1.200	2.119	1.950	1.801	2.600	1.640
0.600	2.308	1.250	2.104	2.000	1.781	2.650	1.636
0.650	2.283	1.300	2.066	2.050	1.762	2.700	1.630
0.700	2.285	1.350	2.058	2.100	1.742		
0.750	2.249	1.400	2.021	2.150	1.729		

## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE=13 DEGREES

FIF G =12.81 DEGRFES X=8.106 INCHES P2 BAR=2.473  
 ALFA G=13.16 DEGRFES YGS=3.089 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.014	2.457	0.614	2.465	1.164	2.260	1.814	1.947
0.114	2.480	0.664	2.463	1.214	2.245	1.864	1.922
0.164	2.519	0.714	2.444	1.264	2.207	1.914	1.892
0.214	2.490	0.814	2.394	1.314	2.195	1.964	1.866
0.314	2.486	0.864	2.413	1.364	2.190	2.014	1.841
0.364	2.531	0.914	2.376	1.464	2.125	2.064	1.823
0.414	2.489	0.964	2.363	1.514	2.080	2.114	1.787
0.464	2.511	1.014	2.339	1.614	2.054	2.164	1.782
0.514	2.489	1.064	2.324	1.664	2.021	2.214	1.755
0.564	2.497	1.114	2.296	1.714	2.003		

NOMINAL SHOCK GENERATOR ANGLE=14 DEGREES

FIF G =13.80 DEGRFES X=8.107 INCHES P2 BAR=2.624  
 ALFA G=14.13 DEGRFES YGS=3.091 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.032	2.552	0.282	2.675	0.582	2.658	0.832	2.576
0.082	2.633	0.332	2.674	0.632	2.650	0.882	2.546
0.132	2.675	0.432	2.658	0.682	2.630	0.932	2.528
0.182	2.662	0.482	2.680	0.732	2.619	0.982	2.524
0.232	2.644	0.532	2.669	0.782	2.581		



## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE= 2 DEGREES

FIF G = 1.62 DEGRFES

X=8.570 INCHES

P2 BAR=1.156

ALFA G= 1.93 DEGRFES

YGS=3.110 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.083	1.168	1.383	1.135	2.833	1.092	4.333	1.034
0.133	1.142	1.433	1.138	2.883	1.105	4.383	1.029
0.183	1.156	1.433	1.139	2.933	1.096	4.433	1.034
0.233	1.135	1.483	1.137	2.983	1.104	4.483	1.028
0.283	1.144	1.533	1.137	3.033	1.092	4.533	1.028
0.333	1.128	1.583	1.134	3.083	1.099	4.583	1.024
0.383	1.141	1.633	1.133	3.133	1.095	4.633	1.022
0.433	1.130	1.683	1.136	3.183	1.095	4.683	1.024
0.483	1.141	1.733	1.132	3.233	1.085	4.733	1.018
0.533	1.129	1.783	1.131	3.283	1.089	4.783	1.021
0.583	1.142	1.833	1.131	3.333	1.077	4.833	1.019
0.633	1.137	1.883	1.134	3.383	1.091	4.883	1.026
0.733	1.140	1.983	1.126	3.483	1.070	4.983	1.019
0.783	1.132	2.033	1.128	3.533	1.080	5.033	1.021
0.833	1.140	2.083	1.126	3.583	1.064	5.083	1.018
0.883	1.129	2.133	1.122	3.633	1.074	5.133	1.017
0.983	1.129	2.233	1.120	3.733	1.068	5.233	1.018
1.033	1.140	2.283	1.117	3.783	1.048	5.283	1.018
1.083	1.123	2.333	1.111	3.833	1.058	5.333	1.013
1.133	1.141	2.383	1.114	3.883	1.050	5.383	1.017
1.183	1.133	2.433	1.117	3.933	1.061	5.433	1.021
1.233	1.141	2.483	1.111	3.983	1.042	5.483	1.013
1.233	1.139	2.533	1.109	4.033	1.052	5.533	1.016
1.283	1.127	2.583	1.109	4.083	1.037	5.583	1.022
1.333	1.140	2.633	1.103	4.133	1.043	5.633	1.012
1.333	1.137	2.683	1.110	4.183	1.023	5.683	1.009
1.383	1.121	2.733	1.106	4.233	1.037		

NOMINAL SHOCK GENERATOR ANGLE= 4 DEGREES

FIF G = 3.73 DEGRFES

X=8.579 INCHES

P2 BAR=1.343

ALFA G= 3.99 DEGRFES

YGS=3.070 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.050	1.326	1.250	1.306	2.700	1.238	4.150	1.087
0.100	1.352	1.300	1.301	2.750	1.222	4.200	1.081
0.150	1.331	1.350	1.300	2.800	1.230	4.250	1.076
0.200	1.333	1.400	1.299	2.850	1.215	4.300	1.069
0.250	1.315	1.450	1.297	2.900	1.226	4.350	1.064
0.300	1.321	1.500	1.295	2.950	1.210	4.400	1.063
0.350	1.319	1.550	1.292	3.000	1.217	4.450	1.050
0.450	1.313	1.600	1.298	3.050	1.198	4.500	1.054
0.500	1.311	1.700	1.284	3.100	1.216	4.550	1.042

## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.550	1.316	1.750	1.288	3.200	1.184	4.600	1.052
0.600	1.307	1.800	1.281	3.250	1.201	4.700	1.035
0.700	1.308	1.850	1.281	3.300	1.180	4.750	1.039
0.750	1.311	1.950	1.277	3.350	1.187	4.800	1.031
0.800	1.300	2.000	1.271	3.450	1.178	4.850	1.031
0.850	1.311	2.050	1.268	3.500	1.148	4.950	1.028
0.900	1.308	2.100	1.263	3.550	1.163	5.000	1.022
0.950	1.310	2.150	1.270	3.600	1.142	5.050	1.020
0.950	1.315	2.200	1.258	3.650	1.159	5.100	1.019
1.000	1.296	2.250	1.255	3.700	1.127	5.150	1.026
1.050	1.308	2.300	1.252	3.750	1.142	5.200	1.017
1.050	1.308	2.350	1.245	3.800	1.121	5.250	1.020
1.100	1.288	2.400	1.248	3.850	1.125	5.300	1.021
1.100	1.305	2.450	1.236	3.900	1.111	5.350	1.014
1.150	1.300	2.550	1.237	3.950	1.107	5.400	1.011
1.150	1.309	2.600	1.241	4.050	1.094		
1.200	1.306	2.650	1.230	4.100	1.090		

NOMINAL SHOCK GENERATOR ANGLE= 6 DEGRFES

FIF G = 5.64 DEGRFES

X=8.587 INCHES

P2 BAR=1.560

ALFA G= 6.12 DEGRFES

YGS=3.070 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.042	1.515	1.192	1.469	2.592	1.354	3.992	1.178
0.092	1.549	1.242	1.466	2.642	1.363	4.042	1.176
0.192	1.527	1.292	1.463	2.692	1.339	4.092	1.154
0.242	1.519	1.342	1.467	2.742	1.354	4.142	1.159
0.292	1.516	1.442	1.451	2.792	1.335	4.192	1.135
0.342	1.507	1.492	1.453	2.842	1.354	4.242	1.140
0.442	1.502	1.542	1.446	2.942	1.322	4.292	1.118
0.492	1.502	1.592	1.445	2.992	1.338	4.342	1.127
0.542	1.489	1.692	1.436	3.042	1.313	4.442	1.095
0.592	1.497	1.742	1.425	3.092	1.324	4.492	1.101
0.642	1.503	1.792	1.421	3.192	1.314	4.542	1.081
0.692	1.497	1.842	1.415	3.242	1.286	4.592	1.082
0.692	1.507	1.892	1.422	3.292	1.300	4.692	1.067
0.742	1.484	1.942	1.408	3.342	1.279	4.742	1.050
0.792	1.491	1.992	1.404	3.392	1.296	4.792	1.050
0.792	1.496	2.042	1.401	3.442	1.262	4.842	1.039
0.842	1.479	2.092	1.394	3.492	1.276	4.892	1.049
0.842	1.494	2.142	1.394	3.542	1.240	4.942	1.031
0.892	1.482	2.192	1.374	3.592	1.254	4.992	1.037
0.892	1.493	2.292	1.375	3.642	1.235	5.042	1.031
0.942	1.492	2.342	1.382	3.692	1.236	5.092	1.027
0.992	1.486	2.392	1.371	3.792	1.218	5.142	1.023
1.042	1.481	2.442	1.379	3.842	1.211		
1.092	1.477	2.492	1.360	3.892	1.201		
1.142	1.477	2.542	1.369	3.942	1.196		



## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
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NOMINAL SHOCK GENERATOR ANGLE = 8 DEGREES

FIF G = 7.63 DEGRFES

X=8.593 INCHES

P2 BAR=1.767

ALFA G= 7.95 DEGRFES

YGS=3.069 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.021	1.783	1.071	1.691	2.421	1.492	3.771	1.350
0.071	1.744	1.171	1.662	2.471	1.498	3.821	1.334
0.171	1.768	1.221	1.665	2.521	1.483	3.871	1.336
0.221	1.759	1.271	1.655	2.571	1.496	3.921	1.312
0.271	1.734	1.321	1.644	2.671	1.468	3.971	1.315
0.321	1.741	1.421	1.631	2.721	1.483	4.021	1.287
0.371	1.757	1.471	1.625	2.771	1.460	4.071	1.300
0.421	1.742	1.521	1.611	2.821	1.472	4.171	1.250
0.471	1.755	1.571	1.609	2.921	1.465	4.221	1.264
0.471	1.727	1.621	1.615	2.971	1.434	4.271	1.235
0.521	1.728	1.671	1.595	3.021	1.451	4.321	1.234
0.521	1.743	1.721	1.588	3.071	1.429	4.421	1.209
0.571	1.727	1.771	1.581	3.121	1.451	4.471	1.175
0.571	1.733	1.821	1.573	3.171	1.422	4.521	1.178
0.621	1.714	1.871	1.572	3.221	1.434	4.571	1.151
0.621	1.737	1.921	1.544	3.271	1.409	4.621	1.158
0.671	1.729	2.021	1.529	3.321	1.415	4.671	1.119
0.721	1.725	2.071	1.544	3.371	1.398	4.721	1.127
0.771	1.709	2.121	1.517	3.421	1.400	4.771	1.103
0.821	1.707	2.171	1.537	3.521	1.385	4.821	1.096
0.871	1.706	2.221	1.514	3.571	1.378	4.871	1.076
0.921	1.697	2.271	1.521	3.621	1.366		
0.971	1.691	2.321	1.505	3.671	1.369		
1.021	1.681	2.371	1.512	3.721	1.355		

NOMINAL SHOCK GENERATOR ANGLE=10 DEGREES

FIF G = 9.72 DEGRFES

X=8.599 INCHES

P2 BAR=2.020

ALFA G= 9.96 DEGRFES

YGS=3.112 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.023	2.051	0.983	1.939	2.183	1.658	3.433	1.517
0.083	2.081	1.033	1.929	2.233	1.674	3.483	1.517
0.133	2.032	1.133	1.906	2.283	1.650	3.533	1.506
0.133	2.038	1.183	1.892	2.383	1.603	3.583	1.507
0.183	2.040	1.233	1.869	2.433	1.618	3.633	1.494
0.233	2.039	1.283	1.863	2.483	1.591	3.683	1.495
0.233	2.060	1.333	1.868	2.533	1.605	3.733	1.480
0.283	2.043	1.383	1.841	2.633	1.597	3.783	1.492
0.283	2.035	1.433	1.825	2.683	1.565	3.883	1.460
0.333	2.011	1.483	1.815	2.733	1.584	3.933	1.474
0.333	2.044	1.533	1.813	2.783	1.570	3.983	1.454

## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.383	2.030	1.583	1.798	2.833	1.586	4.033	1.458
0.433	2.029	1.633	1.759	2.883	1.562	4.133	1.440
0.483	2.006	1.733	1.736	2.933	1.571	4.183	1.408
0.533	2.011	1.783	1.751	2.983	1.553	4.233	1.416
0.583	2.004	1.833	1.718	3.033	1.556	4.283	1.391
0.633	1.998	1.883	1.731	3.083	1.550	4.333	1.403
0.683	1.985	1.933	1.699	3.133	1.552	4.383	1.365
0.733	1.979	1.983	1.701	3.233	1.540	4.433	1.375
0.783	1.988	2.033	1.672	3.283	1.533	4.483	1.352
0.883	1.951	2.083	1.680	3.333	1.524	4.533	1.343
0.933	1.954	2.133	1.643	3.383	1.527	4.583	1.323

NOMINAL SHOCK GENERATOR ANGLE=12 DEGREES

FIF G =11.78 DEGREES  
ALFA G=12.01 DEGREESX=8.604 INCHES  
YGS=3.221 INCHES

P2 BAR=2.303

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.046	2.386	0.696	2.313	1.446	2.039	2.146	1.806
0.046	2.415	0.746	2.291	1.496	2.067	2.196	1.753
0.096	2.392	0.846	2.266	1.546	2.014	2.246	1.763
0.146	2.375	0.896	2.251	1.596	2.032	2.346	1.731
0.196	2.340	0.946	2.221	1.646	1.972	2.396	1.684
0.246	2.364	0.996	2.209	1.696	1.976	2.446	1.695
0.296	2.354	1.046	2.228	1.746	1.928	2.496	1.663
0.346	2.350	1.096	2.180	1.796	1.938	2.546	1.690
0.396	2.332	1.146	2.169	1.846	1.892	2.596	1.652
0.446	2.333	1.196	2.148	1.896	1.894	2.646	1.657
0.496	2.346	1.246	2.156	1.946	1.848	2.696	1.637
0.546	2.319	1.296	2.120	1.996	1.870	2.746	1.655
0.646	2.318	1.346	2.087	2.096	1.794		

NOMINAL SHOCK GENERATOR ANGLE=13 DEGREES

FIF G =12.81 DEGREES  
ALFA G=13.17 DEGREESX=8.606 INCHES  
YGS=3.253 INCHES

P2 BAR=2.475

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.050	2.605	0.550	2.515	1.050	2.358	1.550	2.178
0.100	2.552	0.600	2.505	1.100	2.377	1.600	2.125
0.150	2.550	0.700	2.489	1.150	2.331	1.650	2.141
0.200	2.520	0.750	2.468	1.200	2.293	1.700	2.084
0.250	2.519	0.800	2.440	1.300	2.226	1.750	2.088
0.300	2.535	0.850	2.429	1.350	2.249	1.800	2.018
0.350	2.544	0.900	2.447	1.400	2.206	1.850	2.049
0.450	2.508	0.950	2.393	1.450	2.224	1.950	1.964
0.500	2.517	1.000	2.378	1.500	2.167		



## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE=14 DEGREES

FIF G =13.80 DEGRFES

X=8.607 INCHES

P2 BAR=2.620

ALFA G=14.11 DEGRFES

YGS=3.274 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.109	2.740	0.259	2.683	0.409	2.692	0.609	2.671
0.159	2.699	0.309	2.699	0.459	2.703	0.659	2.670
0.209	2.690	0.359	2.681	0.559	2.679	0.709	2.643

NOMINAL SHOCK GENERATOR ANGLE= 2 DEGREES

FIF G = 1.62 DEGREES

X=9.070 INCHES

P2 BAR=1.156

ALFA G= 1.93 DEGRFES

YGS=3.291 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.019	1.183	1.369	1.139	2.869	1.115	4.369	1.041
0.119	1.165	1.419	1.141	2.969	1.114	4.469	1.039
0.219	1.157	1.469	1.141	3.019	1.106	4.519	1.039
0.269	1.166	1.519	1.140	3.069	1.108	4.569	1.034
0.319	1.143	1.569	1.138	3.119	1.106	4.619	1.040
0.369	1.164	1.619	1.141	3.169	1.107	4.669	1.032
0.419	1.137	1.669	1.137	3.219	1.102	4.719	1.034
0.469	1.153	1.719	1.136	3.269	1.106	4.769	1.031
0.519	1.132	1.769	1.135	3.319	1.099	4.819	1.032
0.569	1.148	1.819	1.136	3.369	1.100	4.869	1.028
0.619	1.131	1.869	1.132	3.469	1.093	4.969	1.027
0.719	1.145	1.969	1.131	3.519	1.091	5.019	1.025
0.769	1.130	2.019	1.128	3.569	1.091	5.069	1.030
0.819	1.150	2.069	1.146	3.619	1.084	5.119	1.023
0.869	1.131	2.119	1.126	3.669	1.081	5.169	1.024
0.919	1.145	2.169	1.130	3.719	1.076	5.219	1.018
0.969	1.131	2.219	1.123	3.769	1.074	5.269	1.022
1.019	1.143	2.269	1.127	3.819	1.076	5.319	1.020
1.069	1.131	2.319	1.127	3.869	1.067	5.369	1.021
1.119	1.141	2.369	1.127	3.969	1.063	5.469	1.024
1.169	1.145	2.469	1.132	4.069	1.046	5.569	1.012
1.219	1.146	2.569	1.122	4.119	1.073	5.619	1.021
1.219	1.143	2.619	1.122	4.169	1.053	5.669	1.016
1.269	1.143	2.669	1.120	4.169	1.048		
1.319	1.142	2.669	1.121	4.219	1.045		
1.369	1.129	2.769	1.118	4.269	1.051		

## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE = 4 DEGREES

FIF G = 3.73 DEGRFES  
ALFA G = 3.99 DEGRFESX=9.079 INCHES  
YGS=3.249 INCHES

P2 BAR=1.343

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.017	1.351	1.217	1.310	2.717	1.247	4.167	1.109
0.067	1.344	1.267	1.308	2.767	1.251	4.217	1.111
0.117	1.354	1.317	1.313	2.817	1.248	4.267	1.094
0.167	1.360	1.367	1.307	2.867	1.247	4.317	1.100
0.217	1.347	1.417	1.306	2.917	1.239	4.367	1.086
0.267	1.361	1.467	1.301	2.967	1.241	4.417	1.086
0.317	1.332	1.517	1.301	3.017	1.232	4.467	1.078
0.417	1.343	1.567	1.296	3.067	1.231	4.517	1.077
0.467	1.316	1.667	1.293	3.167	1.222	4.567	1.066
0.517	1.335	1.717	1.287	3.217	1.216	4.667	1.066
0.567	1.308	1.767	1.305	3.267	1.218	4.717	1.054
0.617	1.322	1.817	1.283	3.317	1.208	4.767	1.061
0.667	1.299	1.867	1.290	3.367	1.207	4.817	1.045
0.717	1.316	1.917	1.281	3.417	1.197	4.867	1.048
0.767	1.302	1.967	1.288	3.467	1.197	4.917	1.035
0.817	1.314	2.017	1.285	3.517	1.190	4.967	1.040
0.867	1.320	2.067	1.285	3.567	1.185	5.017	1.034
0.917	1.319	2.167	1.288	3.667	1.174	5.067	1.033
0.917	1.316	2.267	1.279	3.767	1.155	5.167	1.034
0.967	1.317	2.317	1.277	3.817	1.171	5.267	1.022
1.017	1.311	2.367	1.274	3.867	1.147	5.317	1.028
1.067	1.300	2.367	1.273	3.867	1.146	5.367	1.021
1.067	1.312	2.467	1.266	3.917	1.132		
1.117	1.309	2.567	1.263	3.967	1.136		
1.167	1.314	2.667	1.261	4.067	1.119		

NOMINAL SHOCK GENERATOR ANGLE = 6 DEGREES

FIF G = 5.64 DEGRFES  
ALFA G = 6.12 DEGRFESX=9.087 INCHES  
YGS=3.248 INCHES

P2 BAR=1.560

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.043	1.553	1.143	1.473	2.543	1.392	3.893	1.240
0.143	1.561	1.193	1.463	2.593	1.391	3.943	1.240
0.193	1.545	1.243	1.469	2.643	1.384	3.993	1.221
0.243	1.563	1.293	1.459	2.693	1.385	4.043	1.227
0.293	1.530	1.393	1.459	2.743	1.378	4.093	1.205
0.343	1.541	1.443	1.448	2.793	1.373	4.143	1.207
0.393	1.502	1.493	1.468	2.893	1.367	4.193	1.189
0.443	1.525	1.543	1.445	2.943	1.361	4.243	1.188
0.493	1.497	1.593	1.448	2.993	1.362	4.293	1.165
0.543	1.510	1.643	1.437	3.043	1.355	4.393	1.161
0.593	1.507	1.693	1.448	3.093	1.350	4.443	1.139



## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.643	1.508	1.743	1.443	3.143	1.343	4.493	1.145
0.643	1.507	1.793	1.445	3.193	1.339	4.543	1.121
0.693	1.499	1.893	1.447	3.243	1.332	4.593	1.122
0.743	1.492	1.993	1.434	3.293	1.324	4.643	1.100
0.793	1.481	2.043	1.428	3.393	1.314	4.693	1.104
0.793	1.489	2.093	1.429	3.493	1.299	4.743	1.086
0.843	1.488	2.093	1.425	3.543	1.309	4.793	1.088
0.893	1.488	2.193	1.414	3.593	1.289	4.893	1.077
0.943	1.486	2.293	1.412	3.593	1.289	4.993	1.057
0.993	1.478	2.393	1.405	3.643	1.271	5.043	1.063
1.043	1.484	2.443	1.394	3.693	1.275	5.093	1.047
1.093	1.472	2.493	1.396	3.793	1.253		

NOMINAL SHOCK GENERATOR ANGLE = 8 DEGREES

FIF G = 7.63 DEGRFES  
ALFA G = 7.95 DEGRFES

X=9.093 INCHES  
YGS=3.247 INCHES

P2 BAR=1.767

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.054	1.783	1.104	1.676	2.404	1.534	3.704	1.397
0.104	1.771	1.154	1.653	2.454	1.525	3.754	1.404
0.154	1.792	1.204	1.677	2.504	1.524	3.804	1.387
0.204	1.772	1.254	1.641	2.604	1.515	3.854	1.387
0.254	1.787	1.304	1.647	2.654	1.511	3.904	1.373
0.304	1.782	1.354	1.627	2.704	1.508	3.954	1.372
0.354	1.784	1.404	1.639	2.754	1.505	4.004	1.352
0.354	1.771	1.454	1.630	2.804	1.497	4.104	1.345
0.404	1.759	1.504	1.632	2.854	1.494	4.154	1.323
0.454	1.748	1.604	1.632	2.904	1.491	4.204	1.328
0.504	1.732	1.704	1.615	2.954	1.488	4.254	1.301
0.504	1.733	1.754	1.603	3.004	1.480	4.304	1.301
0.554	1.738	1.804	1.604	3.104	1.470	4.354	1.273
0.604	1.732	1.804	1.594	3.204	1.460	4.404	1.276
0.654	1.726	1.904	1.578	3.254	1.470	4.454	1.249
0.704	1.715	2.004	1.570	3.304	1.450	4.504	1.250
0.754	1.722	2.104	1.562	3.304	1.449	4.604	1.228
0.804	1.705	2.154	1.548	3.354	1.433	4.704	1.196
0.854	1.708	2.204	1.547	3.404	1.439	4.754	1.202
0.904	1.687	2.254	1.544	3.504	1.423	4.804	1.172
0.954	1.696	2.304	1.542	3.604	1.414		
1.004	1.676	2.354	1.533	3.654	1.413		

## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE=10 DEGREES

FIF G = 9.72 DEGRFES X=9.099 INCHES P2 BAR=2.020  
 ALFA G= 9.96 DEGRFES YGS=3.293 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.048	2.073	0.898	1.979	1.998	1.728	2.998	1.583
0.048	2.093	0.948	1.935	2.048	1.719	3.048	1.570
0.098	2.087	0.998	1.942	2.098	1.705	3.098	1.573
0.148	2.069	1.048	1.908	2.148	1.698	3.198	1.566
0.198	2.035	1.098	1.929	2.198	1.679	3.298	1.562
0.198	2.068	1.148	1.911	2.298	1.669	3.348	1.562
0.248	2.076	1.198	1.918	2.348	1.649	3.398	1.553
0.298	2.075	1.298	1.915	2.398	1.652	3.448	1.554
0.348	2.066	1.398	1.881	2.448	1.638	3.498	1.547
0.398	2.048	1.448	1.869	2.498	1.626	3.548	1.543
0.448	2.059	1.498	1.863	2.548	1.618	3.598	1.538
0.498	2.025	1.498	1.839	2.598	1.613	3.648	1.540
0.548	2.031	1.598	1.816	2.648	1.607	3.698	1.529
0.598	2.000	1.698	1.795	2.698	1.600	3.798	1.530
0.648	2.013	1.798	1.776	2.798	1.588	3.848	1.517
0.698	1.986	1.848	1.761	2.898	1.577	3.898	1.522
0.798	1.983	1.898	1.746	2.948	1.591	3.948	1.509
0.848	1.954	1.948	1.744	2.998	1.579	3.998	1.508

NOMINAL SHOCK GENERATOR ANGLE=12 DEGREES

FIF G =11.78 DEGRFES X=9.104 INCHES P2 BAR=2.303  
 ALFA G=12.01 DEGRFES YGS=3.416 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.041	2.199	0.641	2.316	1.291	2.172	1.991	1.931
0.091	2.421	0.691	2.323	1.391	2.141	2.041	1.889
0.141	2.403	0.741	2.281	1.491	2.109	2.091	1.887
0.191	2.393	0.791	2.313	1.541	2.086	2.141	1.852
0.241	2.397	0.841	2.283	1.591	2.066	2.191	1.838
0.291	2.378	0.891	2.293	1.641	2.062	2.241	1.809
0.341	2.394	0.991	2.293	1.691	2.038	2.291	1.809
0.391	2.372	1.091	2.251	1.741	2.022	2.341	1.786
0.491	2.370	1.141	2.232	1.791	2.001	2.391	1.767
0.541	2.336	1.191	2.224	1.841	1.987	2.491	1.734
0.591	2.366	1.191	2.190	1.891	1.955		



## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE = 13 DEGREES

FIF G = 12.81 DEGREES X = 9.106 INCHES P2 BAR = 2.475  
 ALFA G = 13.17 DEGREES YGS = 3.442 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.037	2.582	0.437	2.571	0.837	2.538	1.337	2.350
0.087	2.556	0.487	2.535	0.937	2.489	1.387	2.326
0.137	2.572	0.537	2.536	0.987	2.468	1.437	2.307
0.187	2.571	0.587	2.509	1.037	2.456	1.487	2.307
0.237	2.555	0.637	2.550	1.037	2.415		
0.337	2.558	0.687	2.524	1.137	2.401		
0.387	2.542	0.737	2.531	1.237	2.367		

NOMINAL SHOCK GENERATOR ANGLE = 14 DEGREES

FIF G = 13.80 DEGREES X = 9.107 INCHES P2 BAR = 2.620  
 ALFA G = 14.11 DEGREES YGS = 3.464 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.036	2.603	0.136	2.691	0.236	2.704	0.336	2.696
0.086	2.609	0.186	2.690	0.286	2.693	0.437	2.571

NOMINAL SHOCK GENERATOR ANGLE = 2 DEGREES

FIF G = 1.62 DEGREES X = 9.570 INCHES P2 BAR = 1.156  
 ALFA G = 1.93 DEGREES YGS = 3.473 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.055	1.159	1.355	1.132	2.805	1.131	4.305	1.069
0.105	1.160	1.355	1.147	2.855	1.147	4.355	1.073
0.205	1.154	1.455	1.142	2.955	1.137	4.455	1.061
0.255	1.158	1.505	1.145	3.005	1.125	4.505	1.058
0.305	1.161	1.555	1.144	3.055	1.135	4.555	1.063
0.355	1.159	1.605	1.141	3.105	1.121	4.605	1.053
0.405	1.168	1.655	1.151	3.155	1.139	4.655	1.066
0.455	1.161	1.705	1.142	3.205	1.120	4.705	1.051
0.505	1.156	1.755	1.147	3.255	1.131	4.755	1.056
0.555	1.160	1.805	1.147	3.305	1.118	4.805	1.046
0.605	1.158	1.855	1.155	3.355	1.133	4.855	1.053
0.705	1.150	1.955	1.144	3.455	1.109	4.955	1.035
0.755	1.151	2.005	1.153	3.505	1.127	5.005	1.046
0.805	1.151	2.055	1.147	3.555	1.106	5.055	1.035
0.855	1.144	2.105	1.150	3.605	1.120	5.105	1.041
0.905	1.150	2.155	1.147	3.655	1.099	5.155	1.032
0.955	1.140	2.205	1.150	3.705	1.114	5.205	1.038
1.005	1.150	2.255	1.145	3.755	1.095	5.255	1.031
1.055	1.137	2.305	1.145	3.805	1.106	5.305	1.033
1.105	1.151	2.355	1.147	3.855	1.090	5.355	1.031

## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
1.155	1.134	2.405	1.144	3.905	1.101	5.405	1.032
1.155	1.154	2.455	1.143	3.955	1.083	5.455	1.029
1.205	1.146	2.505	1.144	4.005	1.099	5.505	1.031
1.255	1.138	2.605	1.141	4.105	1.089	5.605	1.030
1.255	1.153	2.655	1.149	4.155	1.084		
1.305	1.149	2.755	1.150	4.255	1.082		

NOMINAL SHOCK GENERATOR ANGLE = 4 DEGREES

FIF G = 3.73 DEGRFES  
ALFA G = 3.99 DEGREESX=9.579 INCHES  
YGS=3.428 INCHES

P2 BAR=1.343

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.035	1.275	1.235	1.301	2.685	1.283	4.135	1.155
0.085	1.251	1.285	1.301	2.735	1.289	4.185	1.146
0.135	1.290	1.335	1.307	2.785	1.277	4.235	1.147
0.185	1.288	1.385	1.301	2.835	1.293	4.285	1.133
0.235	1.324	1.435	1.301	2.885	1.271	4.335	1.144
0.285	1.330	1.485	1.306	2.935	1.278	4.385	1.122
0.385	1.330	1.535	1.312	2.985	1.263	4.435	1.125
0.435	1.336	1.635	1.303	3.035	1.276	4.485	1.108
0.485	1.335	1.685	1.310	3.135	1.248	4.535	1.114
0.535	1.328	1.735	1.305	3.185	1.267	4.635	1.087
0.585	1.331	1.785	1.305	3.235	1.243	4.685	1.095
0.635	1.321	1.835	1.305	3.285	1.257	4.735	1.077
0.685	1.327	1.885	1.306	3.335	1.234	4.785	1.080
0.735	1.312	1.935	1.304	3.385	1.246	4.835	1.068
0.785	1.324	1.985	1.301	3.435	1.227	4.885	1.072
0.835	1.304	2.035	1.306	3.485	1.232	4.935	1.061
0.835	1.321	2.085	1.298	3.535	1.219	4.985	1.063
0.885	1.315	2.135	1.301	3.585	1.224	5.035	1.055
0.935	1.306	2.185	1.300	3.635	1.206	5.085	1.055
0.935	1.318	2.285	1.294	3.685	1.218	5.135	1.048
0.985	1.316	2.335	1.299	3.785	1.203	5.185	1.051
1.035	1.295	2.435	1.300	3.835	1.191	5.285	1.044
1.035	1.308	2.485	1.288	3.935	1.185		
1.135	1.301	2.535	1.294	3.985	1.172		
1.185	1.307	2.635	1.289	4.035	1.171		



## SURFACE STATIC PRESSURE DATA

NOMINAL SHOCK GENERATOR ANGLE= 6 DEGREES

FIF G = 5.64 DEGREES  
ALFA G= 6.12 DEGREESX=9.587 INCHES  
YGS=3.427 INCHES

P2 BAR=1.560

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.093	1.459	1.143	1.462	2.493	1.415	3.843	1.303
0.143	1.434	1.193	1.471	2.543	1.435	3.893	1.291
0.193	1.495	1.243	1.474	2.593	1.411	3.943	1.293
0.243	1.493	1.343	1.469	2.643	1.414	3.993	1.274
0.293	1.530	1.393	1.471	2.693	1.406	4.043	1.284
0.343	1.516	1.443	1.467	2.743	1.417	4.093	1.259
0.393	1.534	1.493	1.459	2.843	1.394	4.143	1.260
0.443	1.515	1.543	1.462	2.893	1.409	4.193	1.241
0.493	1.532	1.593	1.458	2.943	1.391	4.243	1.244
0.543	1.506	1.643	1.457	2.993	1.403	4.343	1.209
0.543	1.527	1.693	1.447	3.043	1.382	4.393	1.216
0.593	1.521	1.743	1.453	3.093	1.394	4.443	1.189
0.643	1.504	1.793	1.441	3.143	1.375	4.493	1.194
0.643	1.519	1.843	1.448	3.193	1.380	4.543	1.168
0.693	1.522	1.893	1.442	3.243	1.366	4.593	1.174
0.743	1.493	1.993	1.438	3.293	1.371	4.643	1.151
0.743	1.504	2.043	1.422	3.343	1.353	4.693	1.152
0.843	1.489	2.143	1.440	3.393	1.365	4.743	1.136
0.893	1.495	2.193	1.431	3.493	1.348	4.793	1.133
0.943	1.483	2.243	1.436	3.543	1.340	4.843	1.119
0.993	1.481	2.343	1.426	3.643	1.333	4.893	1.121
1.043	1.484	2.393	1.423	3.693	1.321	4.993	1.104
1.093	1.473	2.443	1.429	3.743	1.319		

NOMINAL SHOCK GENERATOR ANGLE= 8 DEGREES

FIF G = 7.63 DEGREES  
ALFA G= 7.95 DEGREESX=9.593 INCHES  
YGS=3.426 INCHES

P2 BAR=1.767

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.037	1.598	1.087	1.713	2.337	1.547	3.637	1.455
0.087	1.683	1.137	1.702	2.387	1.544	3.687	1.446
0.137	1.661	1.187	1.696	2.437	1.555	3.737	1.452
0.187	1.712	1.237	1.690	2.537	1.527	3.787	1.434
0.237	1.694	1.287	1.688	2.587	1.543	3.837	1.436
0.237	1.724	1.337	1.678	2.637	1.525	3.887	1.419
0.287	1.763	1.387	1.667	2.687	1.532	3.937	1.428
0.337	1.746	1.437	1.668	2.737	1.519	4.037	1.393
0.337	1.767	1.487	1.654	2.787	1.526	4.087	1.406
0.387	1.794	1.537	1.651	2.837	1.512	4.137	1.381
0.437	1.753	1.587	1.646	2.887	1.513	4.187	1.386
0.437	1.771	1.687	1.626	2.937	1.504	4.237	1.365
0.537	1.758	1.737	1.611	2.987	1.506	4.287	1.367

## SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.587	1.772	1.837	1.621	3.037	1.492	4.337	1.346
0.637	1.754	1.887	1.603	3.087	1.502	4.387	1.344
0.687	1.748	1.937	1.606	3.187	1.492	4.437	1.326
0.737	1.759	2.037	1.581	3.237	1.483	4.487	1.323
0.787	1.732	2.087	1.585	3.337	1.482	4.537	1.303
0.837	1.713	2.137	1.584	3.387	1.475	4.587	1.308
0.887	1.716	2.187	1.572	3.437	1.473	4.687	1.289
0.937	1.714	2.237	1.587	3.537	1.461		
1.037	1.708	2.287	1.558	3.587	1.460		

NOMINAL SHOCK GENERATOR ANGLE=10 DEGREES

FIF G = 9.72 DEGRFES      X=9.599 INCHES      P2 BAR=2.020  
 ALFA G= 9.96 DEGRFES      YGS=3.474 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.012	1.617	0.862	2.017	1.862	1.814	2.762	1.628
0.012	1.644	0.912	2.014	1.912	1.834	2.862	1.604
0.062	1.945	0.962	1.998	1.962	1.791	2.912	1.587
0.112	1.871	1.012	1.995	2.012	1.767	3.012	1.597
0.112	1.887	1.062	1.964	2.062	1.765	3.062	1.587
0.212	1.944	1.112	1.976	2.112	1.767	3.112	1.592
0.262	2.031	1.162	1.943	2.212	1.720	3.212	1.582
0.312	2.018	1.212	1.952	2.262	1.737	3.262	1.582
0.362	2.068	1.262	1.939	2.312	1.696	3.312	1.585
0.412	2.088	1.362	1.911	2.362	1.704	3.362	1.578
0.462	2.073	1.412	1.898	2.412	1.673	3.412	1.582
0.512	2.048	1.512	1.903	2.462	1.681	3.462	1.573
0.562	2.059	1.562	1.881	2.512	1.651	3.512	1.569
0.612	2.049	1.612	1.880	2.562	1.654	3.562	1.567
0.712	2.037	1.712	1.847	2.612	1.630	3.612	1.567
0.762	2.048	1.762	1.840	2.662	1.638	3.712	1.555
0.812	2.034	1.812	1.841	2.712	1.615		

NOMINAL SHOCK GENERATOR ANGLE=12 DEGREES

FIF G =11.78 DEGRFES      X=9.604 INCHES      P2 BAR=2.303  
 ALFA G=12.01 DEGRFES      YGS=3.603 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.037	2.171	0.637	2.402	1.287	2.259	1.937	2.063
0.087	2.158	0.687	2.403	1.387	2.224	1.987	2.006
0.137	2.231	0.737	2.377	1.437	2.218	2.037	2.013
0.187	2.208	0.787	2.389	1.487	2.220	2.087	1.967
0.237	2.279	0.837	2.355	1.537	2.184	2.137	1.971
0.287	2.269	0.887	2.363	1.587	2.216	2.187	1.924
0.387	2.361	0.937	2.348	1.637	2.155	2.237	1.927
0.437	2.386	1.037	2.306	1.687	2.140	2.287	1.889
0.487	2.409	1.087	2.297	1.737	2.116	2.337	1.901



A-43

# SURFACE STATIC PRESSURE DATA

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.537	2.400	1.187	2.300	1.787	2.118	2.387	1.879
0.587	2.413	1.237	2.275	1.887	2.039	2.437	1.898

NOMINAL SHOCK GENERATOR ANGLE=13 DEGREES

FIF G =12.81 DEGRFES X=9.606 INCHES P2 BAR=2.475  
ALFA G=13.17 DEGRFES YGS=3.631 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.023	2.097	0.423	2.534	0.773	2.542	1.273	2.433
0.073	2.378	0.473	2.535	0.873	2.506	1.323	2.426
0.123	2.338	0.523	2.561	0.923	2.460	1.373	2.396
0.223	2.422	0.573	2.540	1.023	2.483	1.423	2.429
0.273	2.433	0.623	2.566	1.073	2.473	1.473	2.399
0.323	2.479	0.673	2.541	1.123	2.449		
0.373	2.485	0.723	2.555	1.223	2.421		

NOMINAL SHOCK GENERATOR ANGLE=14 DEGREES

FIF G =13.80 DEGREES X=9.607 INCHES P2 BAR=2.620  
ALFA G=14.11 DEGREES YGS=3.654 INCHES

YG	P BAR	YG	P BAR	YG	P BAR	YG	P BAR
0.014	2.310	0.114	2.528	0.214	2.589	0.364	2.646
0.064	2.612	0.164	2.595	0.314	2.673	0.423	2.534

IHC900I EXECUTION TERMINATING DUE TO ERROR COUNT FOR ERROR NUMBER 217

IHC217I FIOCS - END OF DATA SET ON UNIT 5

TRACEBACK ROUTINE	CALLED FROM ISN	REG. 14	REG. 15	REG. 0	REG. 1
IBCOM		00059F58	0005C8A0	00000002	00059EBC
MAIN		000182F2	01051408	FD000008	00066FF8

ENTRY POINT= 01051408

**SURFACE HEAT TRANSFER DATA WITH VARIABLE STAGNATION PRESSURE**  
**INSTRUMENTATION LOCATED AHEAD OF INTERACTION**



B-1

SURFACE HEAT TRANSFER DATA WITH VARIABLE STAGNATION PRESSURE  
INSTRUMENTATION LOCATED AHEAD OF INTERACTION

SLUG CALORIMETER NO.= 2

RUN NO.=2034

	PSTAG	TWALL	TSTAG	RE	THETA	QDOT	CHVD	CH	CH/CHVD
200.	518.2	482.1	0.705E	05	2.28	0.000635	0.000746	1.17	
180.	515.3	476.6	0.640E	05	2.23	0.000644	0.000774	1.20	
160.	514.7	476.3	0.575E	05	1.83	0.000656	0.000721	1.10	
140.	513.5	477.7	0.511E	05	1.60	0.000671	0.000764	1.14	
120.	512.8	477.1	0.446E	05	1.34	0.000688	0.000737	1.07	
100.	512.7	478.5	0.381E	05	1.12	0.000708	0.000747	1.06	
80.	510.4	478.6	0.316E	05	0.76	0.000734	0.000677	0.92	
75.	504.5	482.7	0.300E	05	0.67	0.000746	0.000734	0.98	
100.	522.4	486.8	0.381E	05	1.22	0.000707	0.000807	1.14	
125.	504.7	483.3	0.462E	05	1.14	0.000691	0.000747	1.08	
150.	505.1	482.6	0.543E	05	1.36	0.000671	0.000731	1.09	
175.	506.2	482.4	0.624E	05	1.67	0.000655	0.000748	1.14	
200.	506.1	478.8	0.705E	05	1.85	0.000640	0.000688	1.08	

B-2

SURFACE HEAT TRANSFER DATA WITH VARIABLE STAGNATION PRESSURE  
INSTRUMENTATION LOCATED AHEAD OF INTERACTION

SLUG CALORIMETER NO. = 3

RUN NO. = 2034

PSTAG	TWALL	TSTAG	RE THETA	QDOT	CHVD	CH	CH/CHVD
200.	518.2	482.1	0.705E 05	2.34	0.000635	0.000764	1.20
180.	515.3	476.6	0.640E 05	2.30	0.000644	0.000805	1.25
160.	514.7	476.3	0.575E 05	1.90	0.000656	0.000751	1.14
140.	513.5	477.7	0.511E 05	1.82	0.000671	0.000838	1.25
120.	512.8	477.0	0.446E 05	1.42	0.000688	0.000775	1.13
100.	512.8	478.5	0.381E 05	1.21	0.000708	0.000811	1.14
80.	510.5	478.6	0.316E 05	0.98	0.000734	0.000848	1.16
75.	504.5	482.7	0.300E 05	0.75	0.000746	0.000794	1.06
100.	522.4	486.8	0.381E 05	1.30	0.000707	0.000853	1.21
125.	504.7	483.3	0.462E 05	1.16	0.000691	0.000762	1.10
150.	505.0	482.6	0.543E 05	1.37	0.000672	0.000747	1.11
175.	506.2	482.4	0.624E 05	1.73	0.000655	0.000778	1.19
200.	506.1	478.8	0.705E 05	1.99	0.000640	0.000739	1.16



SURFACE HEAT TRANSFER DATA WITH VARIABLE STAGMATION PRESSURE  
INSTRUMENTATION LOCATED AHEAD OF INTERACTION

SLUG CALORIMETER NO. = 4

RIIN NO. = 2034

PSTAG	TWALL	TSTAG	RE	THETA	QDOT	CHVD	CH	CH/CHVD
200.	518.2	482.1	0.705E	05	2.16	0.000635	0.000703	1.11
180.	515.3	476.5	0.640E	05	2.01	0.000644	0.000711	1.10
160.	514.7	476.3	0.575E	05	1.79	0.000656	0.000706	1.08
140.	513.5	477.6	0.511E	05	1.59	0.000671	0.000741	1.10
120.	512.8	477.1	0.446E	05	1.28	0.000688	0.000700	1.02
100.	512.7	478.4	0.381E	05	1.08	0.000708	0.000724	1.02
80.	510.3	478.6	0.316E	05	0.87	0.000734	0.000746	1.02
75.	504.5	482.8	0.300E	05	0.68	0.000747	0.000730	0.98
100.	522.5	486.7	0.381E	05	1.16	0.000707	0.000760	1.07
125.	504.6	483.2	0.462E	05	1.10	0.000691	0.000716	1.04
150.	505.1	482.6	0.543E	05	1.34	0.000671	0.000714	1.06
175.	506.1	482.4	0.624E	05	1.58	0.000655	0.000711	1.08
200.	506.1	478.8	0.705E	05	1.84	0.000640	0.000678	1.06

B-4

SURFACE HEAT TRANSFER DATA WITH VARIABLE STAGNATION PRESSURE  
INSTRUMENTATION LOCATED AHEAD OF INTERACTION

SLUG CALORIMETER NO. = 5

RIJN NO. = 2034

	PSTAG	TWALL	TSTAG	RE	THETA	QDOT	CHVD	CH	CH/CHVD
200.	518.3	482.0	0.705E	05	2.33	0.000635	0.000747	1.18	
180.	515.2	476.5	0.640E	05	2.16	0.000644	0.000762	1.18	
160.	514.6	476.2	0.575E	05	1.80	0.000656	0.000719	1.10	
140.	513.5	477.6	0.511E	05	1.76	0.000671	0.000800	1.19	
120.	512.7	477.1	0.446E	05	1.31	0.000688	0.000725	1.05	
100.	512.7	478.4	0.381E	05	1.12	0.000708	0.000760	1.07	
80.	510.2	478.5	0.316E	05	0.97	0.000734	0.000814	1.11	
75.	504.5	482.8	0.300E	05	0.66	0.000747	0.000704	0.94	
100.	522.5	486.7	0.381E	05	1.19	0.000707	0.000780	1.10	
125.	504.6	483.2	0.462E	05	1.14	0.000691	0.000725	1.05	
150.	505.1	482.5	0.543E	05	1.42	0.000671	0.000758	1.13	
175.	506.1	482.4	0.624E	05	1.62	0.000655	0.000736	1.12	
200.	506.1	478.8	0.705E	05	1.91	0.000640	0.000706	1.10	



## APPENDIX C

### SURFACE HEAT TRANSFER DATA

APPENDIX C

SURFACE HEAT TRANSFER DATA

RECORDING PAGE BLANK-NOT FILMED

## SURFACE HEAT TRANSFER DATA

NOMINAL SHOCK GENERATOR ANGLE= 2 DEGREES  
X=4.570 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVN	CH/CHVD
0.112	515.6	483.1	1.037	0.000880	0.000709	1.24
0.336	509.2	482.2	0.788	0.000806	0.000712	1.13
0.436	504.3	478.6	0.724	0.000781	0.000713	1.10
0.560	515.6	483.1	1.059	0.000837	0.000709	1.18
0.660	513.8	483.7	0.768	0.000867	0.000710	1.22
0.784	508.8	482.3	0.874	0.000718	0.000712	1.01
0.884	504.3	478.6	0.853	0.000727	0.000713	1.02
1.008	515.6	483.1	0.960	0.000806	0.000709	1.14
1.108	513.8	483.7	0.874	0.000784	0.000710	1.10
1.232	508.6	482.2	0.744	0.000697	0.000712	0.98
1.332	504.3	478.6	0.744	0.000654	0.000713	0.92
1.456	515.6	483.1	0.972	0.000784	0.000709	1.11
1.556	513.8	483.7	0.917	0.000775	0.000710	1.09
1.680	508.8	482.3	0.723	0.000665	0.000712	0.93
1.762	515.9	484.3	0.831	0.000725	0.000709	1.02
1.780	504.4	478.6	0.660	0.000679	0.000713	0.95
1.862	515.5	468.9	1.001	0.000732	0.000701	1.04
1.986	509.2	483.6	0.405	0.000653	0.000713	0.92
2.086	506.7	470.0	1.021	0.000689	0.000707	0.98
2.310	515.5	468.8	1.044	0.000786	0.000701	1.12
2.434	509.3	483.7	0.915	0.000641	0.000713	0.90
2.534	516.8	477.8	0.851	0.000687	0.000705	0.97
2.534	506.8	470.1	0.978	0.000730	0.000707	1.03
2.758	515.4	468.9	1.215	0.000778	0.000701	1.11
2.882	509.2	483.7	0.744	0.000697	0.000713	0.98
2.982	516.9	477.8	1.149	0.000716	0.000705	1.02
2.982	506.8	470.1	1.021	0.000753	0.000707	1.07
3.206	515.5	468.9	1.108	0.000778	0.000701	1.11
3.330	509.6	484.0	0.724	0.000696	0.000713	0.98
3.430	516.9	477.8	1.063	0.000664	0.000705	0.94
3.430	506.7	470.0	0.851	0.000657	0.000707	0.93
3.462	511.3	492.0	0.704	0.000702	0.000716	0.98
3.686	511.8	489.1	0.959	0.000693	0.000714	0.97
3.686	518.0	477.4	1.275	0.000656	0.000704	0.93
3.910	510.9	492.1	0.702	0.000775	0.000716	1.08
4.134	518.0	477.4	0.999	0.000654	0.000704	0.93
4.134	511.7	489.1	0.639	0.000690	0.000714	0.97
4.358	511.3	492.0	0.704	0.000743	0.000716	1.04
4.582	518.1	477.5	0.956	0.000697	0.000704	0.99
4.582	511.5	489.1	0.745	0.000725	0.000714	1.02
4.806	511.4	492.0	0.810	0.000785	0.000716	1.10
5.030	518.0	477.4	0.957	0.000675	0.000704	0.96
5.030	511.7	489.2	0.724	0.000697	0.000714	0.98



## SURFACE HEAT TRANSFER DATA

NOMINAL SHOCK GENERATOR ANGLE = 4 DEGREES  
X=4.579 INCHES

YG	TWALL	TSTAG	QDNT	CH	CHVD	CH/CHVD
0.201	508.2	483.2	1.087	0.001023	0.000713	1.44
0.301	503.3	479.8	0.832	0.000851	0.000714	1.19
0.425	515.8	481.4	1.257	0.000935	0.000708	1.32
0.525	512.9	481.0	0.959	0.000910	0.000709	1.28
0.649	508.2	483.1	0.704	0.000828	0.000713	1.16
0.749	503.4	479.8	0.574	0.000678	0.000714	0.95
0.873	515.8	481.3	0.959	0.000803	0.000708	1.13
0.973	512.6	480.9	0.851	0.000766	0.000709	1.08
1.097	507.5	483.0	0.723	0.000674	0.000713	0.95
1.197	503.8	479.7	0.703	0.000620	0.000714	0.87
1.321	515.9	481.3	0.874	0.000729	0.000708	1.03
1.421	512.5	480.9	0.872	0.000716	0.000709	1.01
1.545	507.5	483.0	0.744	0.000603	0.000713	0.85
1.627	517.8	484.8	0.896	0.000669	0.000708	0.94
1.645	503.7	479.7	0.552	0.000556	0.000714	0.78
1.727	517.0	467.1	1.045	0.000720	0.000699	1.03
1.851	508.2	484.0	0.723	0.000620	0.000714	0.87
1.951	518.0	476.2	1.237	0.000708	0.000704	1.01
1.951	506.9	470.2	1.212	0.000675	0.000707	0.96
2.075	517.9	484.8	1.407	0.000782	0.000708	1.11
2.299	508.1	484.0	0.595	0.000593	0.000714	0.83
2.399	517.9	476.2	0.767	0.000718	0.000704	1.02
2.399	506.9	470.2	1.000	0.000730	0.000707	1.03
2.523	517.8	484.8	1.003	0.000776	0.000708	1.10
2.747	508.5	484.1	0.596	0.000664	0.000713	0.93
2.847	518.0	476.2	1.045	0.000739	0.000704	1.05
2.847	506.9	470.2	0.978	0.000754	0.000707	1.07
2.971	517.8	484.8	0.832	0.000765	0.000708	1.08
3.195	508.5	484.0	0.766	0.000669	0.000713	0.94
3.295	517.9	476.2	1.002	0.000684	0.000704	0.97
3.295	506.9	470.2	0.850	0.000691	0.000707	0.98
3.327	511.3	490.3	0.702	0.000657	0.000715	0.92
3.551	519.6	476.9	0.422	0.000703	0.000703	1.00
3.775	510.8	490.2	0.213	0.000727	0.000715	1.02
3.999	519.6	476.9	0.896	0.000700	0.000703	1.00
3.999	511.8	487.4	0.554	0.000672	0.000713	0.94
4.223	511.4	490.3	0.703	0.000699	0.000715	0.98
4.447	511.4	487.4	0.808	0.000688	0.000714	0.96
4.447	519.9	476.8	1.045	0.000703	0.000703	1.00
4.671	511.5	490.3	0.746	0.000726	0.000715	1.02
4.895	519.6	476.9	0.990	0.000704	0.000703	1.00
4.895	511.8	487.4	0.744	0.000681	0.000713	0.96

## SURFACE HEAT TRANSFER DATA

NOMINAL SHOCK GENERATOR ANGLE = 6 DEGREES  
 X=4.587 INCHES

YG	TWALL	TSTAG	WDOT	CH	CHVD	CH/CHVD
0.077	507.4	483.2	1.237	0.001173	0.000714	1.64
0.177	503.4	481.2	1.768	0.001151	0.000715	1.61
0.301	514.4	481.2	1.322	0.001152	0.000708	1.63
0.401	510.5	480.0	1.289	0.001087	0.000710	1.53
0.525	507.4	483.0	0.959	0.000945	0.000713	1.33
0.625	502.8	480.9	0.874	0.000799	0.000715	1.12
0.749	514.3	481.2	1.065	0.000884	0.000708	1.25
0.849	510.6	479.8	0.939	0.000843	0.000710	1.19
0.973	506.7	483.1	0.766	0.000721	0.000714	1.01
1.073	503.0	481.0	0.638	0.000631	0.000715	0.88
1.197	514.5	481.2	0.767	0.000727	0.000708	1.03
1.297	510.3	479.6	0.830	0.000669	0.000710	0.94
1.421	506.5	483.1	0.574	0.000577	0.000714	0.81
1.503	517.3	484.9	0.981	0.000693	0.000709	0.98
1.521	503.0	481.0	0.617	0.000544	0.000715	0.76
1.603	516.7	467.7	1.129	0.000736	0.000700	1.05
1.727	507.9	484.6	0.701	0.000587	0.000714	0.82
1.827	516.1	474.5	1.214	0.000599	0.000704	0.85
1.827	506.1	471.2	0.722	0.000632	0.000708	0.89
1.951	517.1	484.8	0.959	0.000725	0.000709	1.02
2.175	507.7	484.6	0.722	0.000605	0.000714	0.85
2.275	516.0	474.6	1.022	0.000683	0.000704	0.97
2.275	506.2	471.3	0.851	0.000671	0.000708	0.95
2.399	517.4	484.9	0.896	0.000767	0.000709	1.08
2.623	507.7	484.6	0.659	0.000650	0.000714	0.91
2.723	516.1	474.6	1.130	0.000736	0.000704	1.05
2.723	506.1	471.2	0.871	0.000701	0.000708	0.99
2.847	517.1	484.8	0.959	0.000800	0.000709	1.13
3.071	508.1	484.4	0.680	0.000646	0.000714	0.91
3.171	516.1	474.6	0.874	0.000677	0.000704	0.96
3.171	506.0	471.2	0.787	0.000639	0.000708	0.90
3.203	510.4	489.2	0.808	0.000680	0.000715	0.95
3.427	519.3	477.5	0.852	0.000728	0.000704	1.03
3.427	510.0	486.3	0.511	0.000676	0.000714	0.95
3.651	510.0	489.0	0.425	0.000691	0.000715	0.97
3.875	510.0	486.3	0.788	0.000640	0.000714	0.90
3.875	519.3	477.5	0.938	0.000695	0.000704	0.99
4.099	510.6	489.2	0.744	0.000737	0.000715	1.03
4.323	509.5	486.2	0.679	0.000635	0.000714	0.89
4.323	519.6	477.4	1.002	0.000729	0.000703	1.04
4.547	511.0	489.2	0.745	0.000769	0.000715	1.08
4.771	509.8	486.3	0.744	0.000650	0.000714	0.91
4.771	519.3	477.5	0.980	0.000725	0.000704	1.03



## SURFACE HEAT TRANSFER DATA

NOMINAL SHOCK GENERATOR ANGLE = 8 DEGREES  
X=4.593 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.047	503.2	481.9	1.173	0.001200	0.000715	1.68
0.171	512.4	480.7	1.790	0.001523	0.000709	2.15
0.271	509.0	479.1	1.813	0.001422	0.000710	2.00
0.395	506.3	483.4	1.301	0.001169	0.000714	1.64
0.495	502.6	481.8	1.023	0.001013	0.000716	1.41
0.619	512.2	480.6	1.108	0.001062	0.000709	1.50
0.719	509.3	478.9	1.193	0.001035	0.000710	1.46
0.843	505.7	483.3	0.893	0.000901	0.000715	1.26
0.943	502.6	481.6	0.787	0.000741	0.000716	1.04
1.067	512.2	480.6	0.938	0.000809	0.000709	1.14
1.167	509.2	478.9	0.852	0.000760	0.000710	1.07
1.291	505.4	483.2	0.617	0.000579	0.000715	0.81
1.373	516.0	484.8	0.788	0.000672	0.000709	0.95
1.391	502.7	481.4	0.552	0.000558	0.000715	0.78
1.473	516.1	468.7	1.108	0.000751	0.000701	1.07
1.597	507.5	485.2	0.681	0.000606	0.000715	0.85
1.697	517.1	484.8	0.638	0.000603	0.000709	0.85
1.697	514.8	473.9	0.426	0.000495	0.000704	0.70
1.821	516.1	484.8	0.638	0.000694	0.000709	0.98
2.045	507.3	485.2	0.638	0.000608	0.000715	0.85
2.145	516.9	484.8	0.616	0.000696	0.000709	0.98
2.145	514.9	474.0	0.959	0.000659	0.000704	0.94
2.145	504.4	470.0	0.914	0.000640	0.000708	0.90
2.269	516.1	484.7	0.959	0.000732	0.000709	1.03
2.493	507.3	485.2	0.638	0.000641	0.000715	0.90
2.593	516.9	484.8	0.850	0.000723	0.000709	1.02
2.593	514.6	473.9	0.980	0.000707	0.000704	1.00
2.593	504.5	470.0	0.915	0.000700	0.000708	0.99
2.717	516.0	484.8	0.981	0.000768	0.000709	1.08
2.941	507.0	485.3	0.638	0.000593	0.000715	0.83
3.041	516.9	484.8	0.893	0.000682	0.000709	0.96
3.041	515.0	474.0	0.875	0.000675	0.000704	0.96
3.041	504.5	470.0	0.851	0.000637	0.000708	0.90
3.073	509.7	488.3	0.659	0.000636	0.000715	0.89
3.297	509.6	487.6	0.554	0.000701	0.000715	0.98
3.297	518.2	477.2	1.429	0.000710	0.000704	1.01
3.521	509.7	488.3	0.426	0.000749	0.000715	1.05
3.745	518.2	477.2	0.832	0.000707	0.000704	1.00
3.745	509.7	487.6	0.638	0.000617	0.000715	0.86
3.969	509.8	488.3	0.724	0.000708	0.000715	0.99
4.193	509.4	487.5	0.766	0.000674	0.000715	0.94
4.193	518.3	477.1	0.981	0.000705	0.000704	1.00
4.417	510.2	488.3	0.766	0.000756	0.000715	1.06
4.641	518.2	477.2	0.938	0.000698	0.000704	0.99
4.641	509.6	487.6	0.680	0.000655	0.000715	0.92

## SURFACE HEAT TRANSFER DATA

YG      TWALL      TSTAG      QDOT      CH      CHVD      CH/CHVD

NOMINAL SHOCK GENERATOR ANGLE=10 DEGREES  
X=4.599 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.032	508.7	478.9	1.534	0.001478	0.000711	2.08
0.132	503.7	477.5	1.821	0.001715	0.000713	2.41
0.256	502.8	482.6	1.353	0.001473	0.000716	2.06
0.480	508.6	478.9	1.406	0.001253	0.000711	1.76
0.580	504.3	477.4	1.222	0.001221	0.000712	1.72
0.704	502.5	482.8	1.066	0.001074	0.000716	1.50
0.804	501.0	479.8	1.063	0.001002	0.000715	1.40
0.928	508.4	478.8	1.193	0.000983	0.000711	1.38
1.028	504.5	477.3	1.002	0.000939	0.000712	1.32
1.152	502.6	482.7	0.830	0.000810	0.000716	1.13
1.234	512.9	483.7	0.896	0.000857	0.000711	1.21
1.252	500.8	479.8	0.764	0.000718	0.000716	1.00
1.334	511.6	465.7	1.363	0.000882	0.000701	1.26
1.558	514.2	479.8	0.978	0.000641	0.000708	0.91
1.682	512.4	483.6	0.724	0.000582	0.000711	0.82
1.906	505.2	484.3	0.596	0.000544	0.000715	0.76
2.006	514.2	479.8	0.638	0.000567	0.000708	0.80
2.130	512.5	483.6	0.702	0.000624	0.000711	0.88
2.354	505.3	484.4	0.659	0.000659	0.000715	0.92
2.454	514.2	479.8	0.723	0.000670	0.000708	0.95
2.578	512.6	483.7	0.789	0.000706	0.000711	0.99
2.802	505.6	484.6	0.595	0.000653	0.000715	0.91
2.902	514.1	479.8	0.809	0.000675	0.000708	0.95
2.934	506.8	486.5	0.553	0.000609	0.000716	0.85
3.158	507.7	487.7	0.827	0.000572	0.000716	0.80
3.158	516.1	476.0	1.214	0.000698	0.000705	0.99
3.382	506.9	486.4	0.722	0.000635	0.000716	0.89
3.606	507.7	487.7	0.660	0.000637	0.000716	0.89
3.606	516.1	476.0	0.959	0.000707	0.000705	1.00
3.830	506.7	486.5	0.596	0.000673	0.000716	0.94
4.054	507.6	487.6	0.702	0.000649	0.000716	0.91
4.054	515.9	476.0	0.999	0.000714	0.000705	1.01
4.278	506.6	486.5	0.702	0.000699	0.000716	0.98
4.502	507.6	487.7	0.595	0.000600	0.000716	0.84
4.502	516.1	476.0	0.916	0.000701	0.000705	1.00

NOMINAL SHOCK GENERATOR ANGLE=12 DEGREES  
X=4.604 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.118	501.0	483.1	1.512	0.001726	0.000717	2.41
0.218	500.2	480.0	1.640	0.001713	0.000716	2.39
0.342	507.2	478.0	1.683	0.001594	0.000711	2.24



## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.442	502.2	477.6	1.427	0.001405	0.000714	1.97
0.566	501.4	483.0	1.150	0.001273	0.000717	1.78
0.666	500.3	479.7	1.192	0.001267	0.000716	1.77
0.790	506.5	478.1	1.192	0.001158	0.000711	1.63
0.890	502.1	477.7	1.108	0.001143	0.000714	1.60
1.014	501.3	482.8	0.871	0.000969	0.000717	1.35
1.096	510.5	485.3	1.161	0.001185	0.000713	1.66
1.114	500.3	479.6	1.042	0.001032	0.000716	1.44
1.196	509.6	465.0	1.584	0.001171	0.000702	1.67
1.320	502.9	483.5	0.681	0.000893	0.000716	1.25
1.420	512.6	476.4	1.235	0.000945	0.000707	1.34
1.544	510.7	485.3	1.172	0.000866	0.000713	1.21
1.644	509.3	464.9	0.873	0.000880	0.000702	1.25
1.768	503.2	483.3	0.724	0.000568	0.000716	0.79
1.868	512.4	476.3	0.894	0.000602	0.000707	0.85
1.992	510.1	485.2	0.723	0.000609	0.000713	0.85
2.092	509.4	464.8	0.935	0.000658	0.000702	0.94
2.216	502.8	483.3	0.467	0.000538	0.000716	0.75
2.316	512.1	476.2	0.617	0.000613	0.000707	0.87
2.440	510.2	485.2	0.808	0.000662	0.000713	0.93
2.540	509.4	464.9	0.978	0.000700	0.000702	1.00
2.664	503.2	483.4	0.553	0.000605	0.000716	0.85
2.764	512.7	476.2	0.850	0.000658	0.000707	0.93
2.796	505.4	484.8	0.638	0.000605	0.000716	0.84
3.020	505.8	483.5	0.553	0.000673	0.000715	0.94
3.020	513.5	474.8	1.258	0.000658	0.000705	0.93
3.244	505.5	484.8	0.660	0.000621	0.000716	0.87
3.468	513.5	474.8	0.981	0.000668	0.000705	0.95
3.468	505.8	483.4	0.659	0.000654	0.000715	0.92
3.692	505.3	484.8	0.681	0.000653	0.000716	0.91
3.916	505.7	483.4	0.702	0.000661	0.000715	0.93
3.916	513.5	474.7	1.022	0.000716	0.000705	1.02
4.140	505.1	484.7	0.489	0.000681	0.000716	0.95
4.364	505.7	483.4	0.702	0.000646	0.000715	0.90
4.364	513.5	474.8	1.045	0.000703	0.000705	1.00

NOMINAL SHOCK GENERATOR ANGLE=14 DEGREES  
X=4.607 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.080	499.7	479.7	1.893	0.002150	0.000716	3.00
0.204	503.3	477.5	2.043	0.002047	0.000713	2.87
0.304	499.8	477.2	1.566	0.001732	0.000715	2.42
0.428	497.4	481.5	1.300	0.001469	0.000719	2.04
0.428	498.9	482.8	1.231	0.001416	0.000718	1.97
0.528	499.4	479.7	1.470	0.001557	0.000716	2.18
0.652	503.3	477.5	1.429	0.001455	0.000713	2.04
0.752	500.0	477.1	1.237	0.001330	0.000715	1.86

## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.876	497.5	481.5	0.978	0.001116	0.000718	1.55
0.876	499.0	482.8	0.891	0.001069	0.000718	1.49
0.958	506.9	481.5	1.415	0.001305	0.000713	1.83
0.976	499.4	479.7	1.194	0.001262	0.000716	1.76
1.058	506.8	462.7	1.938	0.001406	0.000703	2.00
1.282	508.8	474.8	1.385	0.001142	0.000708	1.61
1.406	507.3	481.3	1.621	0.001188	0.000713	1.67
1.506	506.8	462.6	1.448	0.001187	0.000702	1.69
1.730	509.0	474.6	0.915	0.000809	0.000708	1.14
1.854	507.6	481.3	0.808	0.000725	0.000712	1.02
1.954	506.4	462.3	1.191	0.000770	0.000703	1.10
2.178	508.5	474.4	0.828	0.000645	0.000708	0.91
2.302	507.6	481.3	0.722	0.000621	0.000712	0.87
2.402	505.5	462.3	0.873	0.000620	0.000703	0.88
2.526	502.5	483.2	0.616	0.000591	0.000716	0.83
2.626	508.3	474.5	0.788	0.000565	0.000708	0.80
2.658	504.1	483.4	0.637	0.000591	0.000716	0.83
2.882	510.6	473.7	0.638	0.000674	0.000707	0.95
2.882	503.3	479.3	0.808	0.000640	0.000714	0.90
3.106	504.1	483.4	0.659	0.000638	0.000716	0.89
3.330	510.4	473.7	0.829	0.000639	0.000707	0.90
3.330	503.4	479.3	0.745	0.000655	0.000714	0.92
3.554	504.1	483.4	0.639	0.000625	0.000716	0.87
3.778	510.4	473.6	0.872	0.000673	0.000707	0.95
3.778	503.4	479.3	0.809	0.000674	0.000714	0.94
4.002	504.0	483.4	0.703	0.000668	0.000716	0.93
4.226	503.3	479.3	0.722	0.000646	0.000714	0.90
4.226	510.6	473.7	0.872	0.000677	0.000707	0.96

NOMINAL SHOCK GENERATOR ANGLE= 2 DEGREES  
X=5.070 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.098	515.6	483.1	1.106	0.000916	0.000709	1.29
0.322	509.2	482.1	0.917	0.000869	0.000712	1.22
0.422	504.4	478.7	0.947	0.000834	0.000713	1.17
0.546	515.6	483.1	1.087	0.000894	0.000709	1.26
0.770	508.8	482.3	0.874	0.000770	0.000712	1.08
0.870	504.3	478.6	0.852	0.000751	0.000713	1.05
0.994	515.6	483.1	0.839	0.000795	0.000709	1.12
1.218	508.7	482.3	0.852	0.000695	0.000712	0.98
1.318	504.4	478.6	0.469	0.000685	0.000713	0.96
1.442	515.6	483.1	0.785	0.000769	0.000709	1.09
1.666	508.8	482.3	0.638	0.000681	0.000712	0.96
1.748	515.8	484.3	1.036	0.000795	0.000709	1.12
1.766	504.4	478.6	0.639	0.000636	0.000713	0.89
1.848	515.5	469.0	1.087	0.000764	0.000701	1.09
1.972	509.7	484.0	0.787	0.000733	0.000713	1.03



## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
2.072	516.4	478.0	1.129	0.000718	0.000706	1.02
2.072	506.9	470.1	0.873	0.000760	0.000707	1.08
2.196	515.9	484.3	1.087	0.000828	0.000709	1.17
2.296	515.4	468.9	1.237	0.000789	0.000701	1.13
2.420	509.5	483.8	0.872	0.000727	0.000713	1.02
2.520	516.4	478.0	1.066	0.000746	0.000706	1.06
2.520	506.8	470.1	1.023	0.000790	0.000707	1.12
2.644	515.9	484.3	1.001	0.000830	0.000709	1.17
2.744	515.4	468.9	1.214	0.000803	0.000701	1.15
2.868	509.4	483.8	0.766	0.000805	0.000713	1.13
2.968	516.8	477.8	1.234	0.000697	0.000705	0.99
2.968	506.8	470.1	0.957	0.000781	0.000707	1.10
3.092	516.0	484.3	0.853	0.000793	0.000709	1.12
3.192	515.5	468.8	0.789	0.000743	0.000701	1.06
3.316	509.4	483.8	0.809	0.000669	0.000713	0.94
3.416	516.9	477.8	0.957	0.000645	0.000705	0.92
3.416	506.8	470.1	0.893	0.000690	0.000707	0.98
3.448	511.3	492.0	0.809	0.000765	0.000716	1.07
3.672	517.9	477.4	0.914	0.000717	0.000704	1.02
3.672	511.6	489.1	0.767	0.000745	0.000714	1.04
3.896	510.9	492.1	0.681	0.000696	0.000716	0.97
4.120	511.7	489.1	0.789	0.000731	0.000714	1.02
4.120	517.9	477.4	0.915	0.000727	0.000704	1.03
4.344	511.1	492.0	0.703	0.000697	0.000716	0.97
4.568	517.9	477.4	1.020	0.000672	0.000704	0.96
4.568	511.7	489.1	1.172	0.000733	0.000714	1.03
4.792	511.0	492.1	0.532	0.000645	0.000716	0.90
5.016	517.8	477.4	0.872	0.000655	0.000704	0.93
5.016	511.8	489.1	0.682	0.000686	0.000714	0.96

NOMINAL SHOCK GENERATOR ANGLE= 4 DEGREES  
X=5.079 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.168	508.3	483.2	1.215	0.001145	0.000713	1.61
0.268	503.7	479.8	1.041	0.000994	0.000714	1.39
0.392	515.8	481.4	1.193	0.000989	0.000708	1.40
0.616	508.2	483.1	0.938	0.000874	0.000713	1.23
0.716	503.0	479.8	0.809	0.000756	0.000714	1.06
0.840	515.8	481.3	1.023	0.000800	0.000708	1.13
1.064	507.5	483.0	1.062	0.000682	0.000713	0.96
1.164	503.7	479.8	0.660	0.000679	0.000714	0.95
1.288	516.0	481.3	1.003	0.000707	0.000708	1.00
1.512	507.6	483.1	0.638	0.000633	0.000713	0.89
1.594	517.4	484.8	0.874	0.000712	0.000709	1.00
1.612	503.7	479.7	0.637	0.000539	0.000714	0.75
1.694	516.9	467.1	1.215	0.000760	0.000699	1.09
1.818	508.5	484.0	0.681	0.000686	0.000713	0.96

## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
1.918	517.9	476.3	1.001	0.000762	0.000704	1.08
1.918	506.9	470.2	0.914	0.000728	0.000707	1.03
2.042	517.7	484.8	0.896	0.000768	0.000709	1.08
2.142	517.0	467.1	1.299	0.000760	0.000699	1.09
2.266	508.4	484.0	0.681	0.000687	0.000713	0.96
2.366	518.0	476.3	1.001	0.000773	0.000704	1.10
2.366	507.0	470.3	0.872	0.000782	0.000707	1.11
2.490	517.7	484.8	0.853	0.000768	0.000709	1.08
2.590	517.0	467.1	1.193	0.000795	0.000699	1.14
2.714	508.0	484.0	0.681	0.000759	0.000714	1.06
2.814	517.9	476.2	1.259	0.000771	0.000704	1.10
2.814	507.0	470.2	1.320	0.000800	0.000707	1.13
2.938	517.9	484.8	0.937	0.000715	0.000708	1.01
3.038	516.9	467.1	1.344	0.000745	0.000699	1.07
3.162	508.1	484.0	0.639	0.000625	0.000714	0.88
3.262	517.9	476.2	1.001	0.000696	0.000704	0.99
3.262	506.9	470.2	0.893	0.000690	0.000707	0.98
3.294	511.5	490.3	0.744	0.000694	0.000715	0.97
3.518	519.5	477.0	0.945	0.000776	0.000703	1.10
3.518	511.7	487.5	0.767	0.000716	0.000713	1.00
3.742	511.1	490.2	0.809	0.000673	0.000715	0.94
3.966	511.8	487.4	0.916	0.000713	0.000713	1.00
3.966	519.6	476.9	1.025	0.000753	0.000703	1.07
4.190	511.1	490.3	0.681	0.000641	0.000715	0.90
4.414	519.5	476.9	0.696	0.000733	0.000703	1.04
4.414	511.8	487.4	1.255	0.000706	0.000713	0.99
4.638	510.9	490.2	0.574	0.000608	0.000715	0.85
4.862	519.6	476.9	0.904	0.000699	0.000703	0.99
4.862	511.8	487.4	0.724	0.000661	0.000713	0.93

NOMINAL SHOCK GENERATOR ANGLE= 6 DEGREES  
X=5.087 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.028	507.4	483.0	0.915	0.000877	0.000713	1.23
0.128	503.6	481.3	1.266	0.001309	0.000715	1.83
0.252	514.5	481.2	1.445	0.001272	0.000708	1.80
0.476	507.4	483.0	1.087	0.001035	0.000713	1.45
0.576	503.3	481.0	0.917	0.000932	0.000715	1.30
0.700	514.2	481.1	1.109	0.000930	0.000709	1.31
0.924	506.9	483.1	0.935	0.000782	0.000714	1.10
1.024	502.8	480.9	0.638	0.000753	0.000715	1.05
1.148	514.5	481.2	0.723	0.000720	0.000708	1.02
1.372	506.6	483.1	0.594	0.000624	0.000714	0.87
1.454	517.0	484.9	0.853	0.000727	0.000709	1.03
1.472	502.9	481.0	0.532	0.000541	0.000715	0.76
1.554	516.7	467.7	1.065	0.000766	0.000700	1.09
1.678	508.3	484.4	0.660	0.000645	0.000714	0.90



## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
1.778	515.7	474.7	0.767	0.000699	0.000704	0.99
1.778	506.4	471.4	0.766	0.000684	0.000708	0.97
1.902	517.3	484.8	0.873	0.000710	0.000709	1.00
2.002	516.6	467.7	1.301	0.000774	0.000700	1.11
2.126	507.9	484.5	0.638	0.000636	0.000714	0.89
2.226	515.7	474.7	0.959	0.000725	0.000704	1.03
2.226	506.3	471.3	0.851	0.000713	0.000708	1.01
2.350	517.3	484.9	0.832	0.000761	0.000709	1.07
2.450	516.7	467.7	1.151	0.000800	0.000700	1.14
2.574	507.7	484.6	0.468	0.000696	0.000714	0.97
2.674	515.9	474.6	1.428	0.000805	0.000704	1.14
2.674	506.2	471.3	0.915	0.000788	0.000708	1.11
2.798	517.3	484.8	0.682	0.000755	0.000709	1.06
2.898	516.5	467.6	1.343	0.000758	0.000700	1.08
3.022	507.8	484.5	0.489	0.000625	0.000714	0.88
3.122	515.9	474.6	0.916	0.000693	0.000704	0.99
3.122	506.1	471.3	0.766	0.000648	0.000708	0.92
3.154	510.9	489.2	0.745	0.000731	0.000715	1.02
3.378	519.3	477.6	1.164	0.000757	0.000704	1.08
3.378	510.3	486.4	0.468	0.000687	0.000714	0.96
3.602	510.2	489.1	0.638	0.000689	0.000715	0.96
3.826	510.0	486.3	0.659	0.000689	0.000714	0.97
3.826	519.4	477.6	1.026	0.000761	0.000704	1.08
4.050	510.3	489.2	0.765	0.000667	0.000715	0.93
4.274	519.3	477.5	1.150	0.000713	0.000704	1.01
4.274	509.8	486.3	0.701	0.000727	0.000714	1.02
4.498	510.1	489.1	0.724	0.000661	0.000715	0.92
4.722	519.4	477.6	1.052	0.000709	0.000704	1.01
4.722	509.9	486.3	0.702	0.000637	0.000714	0.89

NOMINAL SHOCK GENERATOR ANGLE= 8 DEGREES  
X=5.093 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.104	512.3	480.7	1.733	0.001531	0.000709	2.16
0.204	509.1	479.0	1.619	0.001502	0.000710	2.12
0.328	506.3	483.4	1.342	0.001340	0.000714	1.88
0.428	503.1	481.8	1.129	0.001173	0.000715	1.64
0.552	512.2	480.7	1.322	0.001163	0.000709	1.64
0.652	509.3	478.9	1.343	0.001072	0.000710	1.51
0.776	505.7	483.3	0.850	0.000980	0.000715	1.37
0.876	502.5	481.8	0.787	0.000894	0.000716	1.25
1.000	512.2	480.6	1.215	0.000850	0.000709	1.20
1.100	509.2	478.9	0.766	0.000750	0.000710	1.06
1.224	505.5	483.3	0.702	0.000694	0.000715	0.97
1.306	516.4	484.8	0.916	0.000787	0.000709	1.11
1.324	502.6	481.5	0.660	0.000574	0.000715	0.80
1.406	516.1	468.8	1.322	0.000837	0.000701	1.19

## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
1.530	507.0	485.3	0.595	0.000656	0.000715	0.92
1.630	516.9	484.8	0.872	0.000682	0.000709	0.96
1.630	515.0	474.0	0.832	0.000741	0.000704	1.05
1.630	504.6	469.9	0.829	0.000680	0.000708	0.96
1.754	516.1	484.8	0.766	0.000664	0.000709	0.94
1.854	516.1	468.7	1.129	0.000710	0.000701	1.01
1.978	507.4	485.2	0.532	0.000570	0.000715	0.80
2.078	516.9	484.8	0.787	0.000647	0.000709	0.91
2.078	515.0	474.0	1.066	0.000662	0.000704	0.94
2.078	504.3	470.0	0.872	0.000650	0.000708	0.92
2.202	516.0	484.8	0.809	0.000693	0.000709	0.98
2.302	516.1	468.7	1.088	0.000752	0.000701	1.07
2.426	507.3	485.2	0.744	0.000619	0.000715	0.87
2.526	516.9	484.8	0.894	0.000696	0.000709	0.98
2.526	515.0	474.0	0.917	0.000791	0.000704	1.12
2.526	504.4	470.0	0.936	0.000659	0.000708	0.93
2.650	516.2	484.8	0.872	0.000673	0.000709	0.95
2.750	516.2	468.7	0.746	0.000749	0.000701	1.07
2.874	507.2	485.2	0.637	0.000596	0.000715	0.83
2.974	516.9	484.8	0.872	0.000669	0.000709	0.94
2.974	515.0	474.0	0.896	0.000667	0.000704	0.95
2.974	504.4	470.0	0.722	0.000656	0.000708	0.93
3.006	509.8	488.3	0.680	0.000685	0.000715	0.96
3.230	518.3	477.2	1.301	0.000761	0.000704	1.08
3.230	509.8	487.7	0.745	0.000722	0.000715	1.01
3.454	509.7	488.3	0.617	0.000654	0.000715	0.91
3.678	509.7	487.6	0.723	0.000702	0.000715	0.98
3.678	518.2	477.2	0.959	0.000737	0.000704	1.05
3.902	509.7	488.3	0.659	0.000656	0.000715	0.92
4.126	518.3	477.1	1.109	0.000749	0.000704	1.06
4.126	509.6	487.6	0.383	0.000744	0.000715	1.04
4.350	509.7	488.3	0.447	0.000714	0.000715	1.00
4.574	518.1	477.2	0.852	0.000682	0.000704	0.97
4.574	509.6	487.6	0.745	0.000631	0.000715	0.88

NOMINAL SHOCK GENERATOR ANGLE=10 DEGREES  
X=5.099 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.171	502.8	482.6	1.603	0.001723	0.000716	2.41
0.271	501.5	480.0	1.450	0.001536	0.000715	2.15
0.395	508.7	478.9	1.448	0.001380	0.000711	1.94
0.495	504.2	477.4	1.300	0.001258	0.000712	1.77
0.619	502.4	482.7	1.067	0.001209	0.000716	1.69
0.719	500.7	479.9	1.063	0.001096	0.000715	1.53
0.843	508.3	478.8	1.023	0.001031	0.000711	1.45
0.943	504.7	477.3	0.789	0.001030	0.000712	1.45
1.067	502.5	482.8	0.917	0.000909	0.000716	1.27



## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
1.149	513.3	483.6	1.160	0.001104	0.000710	1.56
1.167	501.0	479.8	0.809	0.000838	0.000715	1.17
1.249	511.7	465.8	1.630	0.001102	0.000701	1.57
1.373	505.5	484.6	0.959	0.000927	0.000715	1.30
1.473	513.9	479.8	1.108	0.000888	0.000708	1.25
1.597	512.6	483.7	0.789	0.000728	0.000711	1.02
1.697	511.5	465.6	1.044	0.000729	0.000702	1.04
1.821	505.4	484.5	0.554	0.000584	0.000715	0.82
1.921	514.1	479.8	0.766	0.000650	0.000708	0.92
2.045	512.5	483.6	0.681	0.000571	0.000711	0.80
2.145	511.5	465.6	0.978	0.000636	0.000701	0.91
2.369	514.1	479.8	0.468	0.000665	0.000708	0.94
2.493	512.4	483.6	0.852	0.000554	0.000711	0.78
2.593	511.5	465.6	1.127	0.000650	0.000701	0.93
2.717	505.5	484.6	0.638	0.000623	0.000715	0.87
2.817	514.1	479.8	0.852	0.000661	0.000708	0.93
2.849	506.6	486.5	0.638	0.000643	0.000716	0.90
3.073	508.6	487.8	0.744	0.000733	0.000715	1.03
3.073	516.0	476.1	1.151	0.000775	0.000705	1.10
3.297	506.9	486.5	0.617	0.000659	0.000716	0.92
3.521	516.0	476.0	1.108	0.000725	0.000705	1.03
3.521	508.0	487.8	0.681	0.000662	0.000716	0.92
3.745	506.8	486.5	0.596	0.000643	0.000716	0.90
3.969	507.5	487.7	0.807	0.000587	0.000716	0.82
3.969	516.1	476.0	1.235	0.000776	0.000705	1.10
4.193	506.9	486.5	0.553	0.000636	0.000716	0.89
4.417	507.6	487.7	0.703	0.000602	0.000716	0.84
4.417	516.1	476.0	0.917	0.000712	0.000705	1.01

NOMINAL SHOCK GENERATOR ANGLE=12 DEGREES  
X=5.104 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.114	500.4	480.1	1.849	0.001993	0.000716	2.78
0.238	507.8	478.1	1.917	0.001855	0.000711	2.61
0.338	502.0	477.6	1.591	0.001553	0.000714	2.18
0.462	501.2	483.0	1.446	0.001386	0.000717	1.93
0.562	500.2	479.8	1.620	0.001427	0.000716	1.99
0.686	506.8	478.1	1.638	0.001253	0.000711	1.76
0.786	502.1	477.7	1.194	0.001239	0.000714	1.74
0.910	501.4	482.9	0.977	0.001075	0.000717	1.50
0.992	510.6	485.3	1.240	0.001343	0.000713	1.88
1.010	500.2	479.7	1.109	0.001090	0.000716	1.52
1.092	509.7	465.1	1.785	0.001360	0.000702	1.94
1.216	502.8	483.7	1.130	0.001190	0.000717	1.66
1.316	512.1	476.4	1.491	0.001152	0.000707	1.63
1.440	510.5	485.4	1.108	0.001104	0.000713	1.55
1.540	509.4	465.0	1.514	0.001083	0.000702	1.54

## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
1.664	503.2	483.5	0.829	0.000829	0.000716	1.16
1.764	512.6	476.3	1.128	0.000847	0.000707	1.20
1.888	510.2	485.2	0.574	0.000665	0.000713	0.93
1.988	509.4	464.8	1.021	0.000658	0.000702	0.94
2.112	502.9	483.4	0.425	0.000568	0.000716	0.79
2.212	512.8	476.2	0.596	0.000727	0.000707	1.03
2.336	510.2	485.2	0.319	0.000604	0.000713	0.85
2.436	509.4	464.8	1.086	0.000652	0.000702	0.93
2.560	503.1	483.4	0.659	0.000581	0.000716	0.81
2.660	512.7	476.2	0.786	0.000644	0.000707	0.91
2.692	505.3	484.8	0.617	0.000625	0.000716	0.87
2.916	513.5	475.0	1.044	0.000747	0.000706	1.06
2.916	506.1	483.5	0.638	0.000692	0.000715	0.97
3.140	505.4	484.8	0.594	0.000647	0.000716	0.90
3.364	513.4	475.0	0.917	0.000746	0.000706	1.06
3.364	505.8	483.5	0.638	0.000663	0.000715	0.93
3.588	505.4	484.8	0.785	0.000648	0.000716	0.91
3.812	505.7	483.4	0.404	0.000698	0.000715	0.98
3.812	513.5	474.8	0.917	0.000755	0.000705	1.07
4.036	505.4	484.8	0.722	0.000752	0.000716	1.05
4.260	505.7	483.4	0.617	0.000633	0.000715	0.89
4.260	513.4	474.9	0.916	0.000679	0.000706	0.96

NOMINAL SHOCK GENERATOR ANGLE=14 DEGREES  
X=5.107 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.081	503.3	477.5	1.986	0.002069	0.000713	2.90
0.181	499.8	477.2	1.901	0.002041	0.000715	2.85
0.305	497.5	481.6	1.406	0.001809	0.000719	2.52
0.305	498.8	482.8	1.488	0.001750	0.000718	2.44
0.405	499.7	479.7	1.748	0.001856	0.000716	2.59
0.529	503.4	477.5	1.663	0.001604	0.000713	2.25
0.629	500.0	477.1	1.471	0.001440	0.000715	2.01
0.753	497.4	481.5	1.236	0.001252	0.000719	1.74
0.753	498.9	482.8	1.039	0.001199	0.000718	1.67
0.835	507.0	481.5	1.521	0.001546	0.000713	2.17
0.853	499.6	479.7	1.301	0.001346	0.000716	1.88
0.935	506.9	462.6	2.111	0.001596	0.000702	2.27
1.059	502.4	483.4	1.193	0.001193	0.000717	1.66
1.159	508.8	474.8	1.704	0.001374	0.000708	1.94
1.283	507.0	481.3	1.343	0.001303	0.000713	1.83
1.383	506.7	462.6	1.812	0.001321	0.000703	1.88
1.607	508.8	474.8	1.343	0.001091	0.000708	1.54
1.731	507.3	481.3	1.023	0.000942	0.000713	1.32
1.831	506.7	462.5	1.318	0.000954	0.000703	1.36
2.055	509.0	474.6	0.915	0.000805	0.000708	1.14
2.179	507.6	481.3	0.681	0.000704	0.000712	0.99



## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
2.279	506.3	462.3	0.872	0.000719	0.000703	1.02
2.403	502.3	483.2	0.637	0.000567	0.000717	0.79
2.503	508.5	474.4	0.786	0.000603	0.000708	0.85
2.535	504.0	483.4	0.702	0.000643	0.000716	0.90
2.759	503.3	479.2	0.766	0.000664	0.000714	0.93
2.759	510.7	473.8	0.938	0.000707	0.000706	1.00
2.983	504.1	483.4	0.636	0.000618	0.000716	0.86
3.207	510.8	473.8	0.938	0.000694	0.000706	0.98
3.207	503.4	479.3	0.596	0.000628	0.000714	0.88

NOMINAL SHOCK GENERATOR ANGLE= 2 DEGREES  
X=7.070 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.092	508.5	496.0	0.704	0.000897	0.000720	1.25
0.316	506.5	495.8	0.639	0.000883	0.000721	1.23
0.540	508.3	496.0	0.766	0.000863	0.000720	1.20
0.642	520.3	489.3	0.954	0.000836	0.000710	1.18
0.764	506.5	495.8	0.724	0.000820	0.000721	1.14
0.866	514.2	487.3	1.023	0.000813	0.000712	1.14
0.988	508.3	496.1	0.638	0.000823	0.000720	1.14
1.090	520.3	489.3	0.810	0.000827	0.000710	1.16
1.314	514.2	487.2	0.788	0.000802	0.000712	1.13
1.436	508.3	496.1	0.425	0.000799	0.000720	1.11
1.538	520.3	489.4	1.002	0.000839	0.000710	1.18
1.762	514.1	487.2	0.766	0.000767	0.000712	1.08
1.890	517.5	492.3	0.595	0.000789	0.000713	1.11
1.986	520.3	489.3	0.914	0.000849	0.000710	1.20
2.114	509.6	486.6	0.765	0.000746	0.000714	1.04
2.210	514.2	487.2	0.831	0.000796	0.000712	1.12
2.338	517.5	492.3	0.894	0.000811	0.000713	1.14
2.442	517.7	488.3	0.874	0.000756	0.000710	1.07
2.562	509.5	486.5	0.788	0.000767	0.000714	1.07
2.786	517.6	492.3	0.959	0.000835	0.000713	1.17
2.890	517.8	488.3	0.979	0.000797	0.000710	1.12
2.942	523.1	492.9	0.960	0.000785	0.000710	1.11
3.010	509.6	486.6	0.851	0.000764	0.000714	1.07
3.114	513.5	490.8	0.874	0.000843	0.000714	1.18
3.166	520.5	489.7	1.000	0.000780	0.000710	1.10
3.338	517.8	488.3	0.938	0.000779	0.000710	1.10
3.390	523.0	492.9	0.874	0.000786	0.000710	1.11
3.562	513.5	490.7	0.874	0.000800	0.000714	1.12
3.614	520.4	489.7	0.895	0.000769	0.000710	1.08
3.786	517.7	488.3	0.938	0.000750	0.000710	1.06
3.838	523.1	492.9	0.939	0.000775	0.000710	1.09
4.010	513.5	490.8	0.788	0.000762	0.000714	1.07
4.062	520.5	489.8	0.830	0.000762	0.000710	1.07
4.286	523.1	492.9	0.810	0.000793	0.000710	1.12

## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
4.416	512.8	490.5	0.746	0.000754	0.000714	1.06
4.510	520.5	489.8	0.959	0.000806	0.000710	1.14
4.640	516.7	489.9	0.978	0.000807	0.000712	1.13
4.864	512.9	490.5	0.896	0.000811	0.000714	1.14
5.088	516.6	489.9	0.894	0.000786	0.000712	1.10
5.312	512.8	490.5	0.702	0.000771	0.000714	1.08
5.536	516.6	489.9	0.832	0.000736	0.000712	1.03

NOMINAL SHOCK GENERATOR ANGLE= 4 DEGREES  
X=7.079 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.088	505.2	494.7	0.765	0.001008	0.000721	1.40
0.312	508.4	495.8	0.937	0.001163	0.000720	1.62
0.414	522.2	488.2	1.324	0.001091	0.000708	1.54
0.536	505.1	494.7	0.702	0.000944	0.000721	1.31
0.638	513.0	489.3	1.278	0.000940	0.000714	1.32
0.760	508.3	495.8	0.789	0.000972	0.000720	1.35
0.862	522.0	488.0	1.258	0.000976	0.000708	1.38
0.984	505.2	494.7	0.722	0.000824	0.000721	1.14
1.086	513.0	489.3	1.023	0.000868	0.000714	1.22
1.208	508.3	495.9	0.810	0.000846	0.000720	1.18
1.214	518.3	491.0	0.872	0.000797	0.000712	1.12
1.310	522.0	488.0	1.029	0.000889	0.000708	1.26
1.438	510.4	488.2	0.850	0.000741	0.000715	1.04
1.534	512.8	489.2	0.746	0.000768	0.000714	1.08
1.662	518.4	491.0	1.086	0.000783	0.000711	1.10
1.758	522.0	488.1	1.060	0.000834	0.000708	1.18
1.886	510.4	488.2	0.701	0.000722	0.000715	1.01
1.982	512.9	489.2	0.789	0.000734	0.000714	1.03
2.110	518.3	491.0	0.830	0.000783	0.000712	1.10
2.214	520.5	488.6	1.022	0.000753	0.000709	1.06
2.334	510.4	488.2	0.808	0.000752	0.000715	1.05
2.438	513.0	491.2	0.980	0.000783	0.000715	1.10
2.558	518.4	491.0	1.088	0.000823	0.000711	1.16
2.662	520.5	488.6	1.173	0.000818	0.000709	1.15
2.714	524.6	491.1	1.001	0.000804	0.000708	1.14
2.782	510.5	488.3	0.851	0.000791	0.000715	1.11
2.886	513.1	491.2	0.766	0.000754	0.000715	1.06
2.938	522.3	488.4	0.959	0.000846	0.000708	1.20
3.110	520.6	488.6	0.938	0.000829	0.000709	1.17
3.162	524.5	491.1	1.088	0.000817	0.000708	1.15
3.334	513.0	490.8	0.744	0.000713	0.000714	1.00
3.386	522.3	488.4	1.002	0.000803	0.000708	1.13
3.558	520.6	488.6	0.981	0.000790	0.000709	1.11
3.610	524.6	491.1	0.916	0.000798	0.000708	1.13
3.782	513.1	491.1	0.681	0.000716	0.000715	1.00
3.834	522.2	488.3	0.959	0.000796	0.000708	1.13



## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
3.964	518.4	489.0	0.872	0.000744	0.000710	1.05
3.964	513.4	486.7	0.852	0.000715	0.000712	1.00
4.058	524.6	491.1	0.938	0.000820	0.000708	1.16
4.188	512.3	491.1	0.850	0.000693	0.000715	0.97
4.188	508.1	493.0	0.788	0.000695	0.000719	0.97
4.282	522.3	488.5	1.020	0.000837	0.000708	1.18
4.412	518.3	488.9	0.958	0.000748	0.000710	1.05
4.412	513.3	486.7	0.702	0.000788	0.000712	1.11
4.636	512.3	491.1	0.702	0.000743	0.000715	1.04
4.636	508.3	493.1	0.617	0.000743	0.000718	1.04
4.860	513.4	486.8	0.809	0.000784	0.000712	1.10
4.860	518.3	489.0	0.894	0.000792	0.000710	1.12
5.084	507.8	493.0	0.617	0.000708	0.000719	0.99
5.084	512.2	491.1	0.722	0.000718	0.000715	1.00
5.308	513.3	486.8	0.766	0.000756	0.000712	1.06
5.308	518.3	489.0	0.917	0.000749	0.000710	1.05

NOMINAL SHOCK GENERATOR ANGLE = 6 DEGREES  
X=7.087 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.104	507.8	496.1	1.172	0.001371	0.000720	1.90
0.328	504.3	494.4	0.937	0.001296	0.000721	1.80
0.430	512.5	490.3	1.343	0.001212	0.000714	1.70
0.552	507.6	496.0	0.916	0.001151	0.000720	1.60
0.654	520.6	488.0	1.360	0.001270	0.000709	1.79
0.776	504.3	494.4	0.851	0.000993	0.000721	1.38
0.878	512.5	490.3	1.108	0.001037	0.000714	1.45
1.000	507.5	496.0	0.872	0.000968	0.000720	1.35
1.006	517.8	490.0	1.045	0.001009	0.000711	1.42
1.102	520.6	488.0	1.160	0.001070	0.000709	1.51
1.230	510.0	489.2	0.808	0.000892	0.000715	1.25
1.326	512.3	490.4	0.830	0.000834	0.000715	1.17
1.454	517.6	490.0	1.042	0.000879	0.000711	1.24
1.550	520.6	488.1	1.096	0.000917	0.000709	1.29
1.678	509.8	489.3	0.744	0.000711	0.000715	1.00
1.774	512.3	490.4	0.787	0.000732	0.000715	1.02
1.902	517.7	490.0	0.894	0.000802	0.000711	1.13
2.006	518.9	489.2	0.852	0.000739	0.000710	1.04
2.126	509.6	489.3	0.722	0.000691	0.000716	0.97
2.230	513.0	492.2	0.490	0.000749	0.000715	1.05
2.350	517.8	490.0	0.874	0.000799	0.000711	1.12
2.454	518.8	489.2	0.896	0.000773	0.000710	1.09
2.506	524.6	490.8	0.809	0.000778	0.000708	1.10
2.574	510.0	489.2	0.787	0.000740	0.000715	1.03
2.678	513.0	492.1	0.725	0.000741	0.000715	1.04
2.730	522.0	487.6	1.194	0.000793	0.000708	1.12
2.902	518.9	489.2	0.896	0.000793	0.000710	1.12

## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
2.954	524.6	490.8	1.022	0.000831	0.000708	1.17
3.126	512.9	492.1	0.724	0.000740	0.000715	1.03
3.178	522.0	487.6	0.895	0.000757	0.000708	1.07
3.350	518.8	480.2	0.873	0.000770	0.000710	1.08
3.402	524.8	490.8	1.109	0.000817	0.000708	1.15
3.574	513.0	492.1	0.660	0.000716	0.000715	1.00
3.626	522.0	487.6	1.023	0.000793	0.000708	1.12
3.756	518.0	488.6	0.851	0.000705	0.000710	0.99
3.980	511.5	491.4	1.042	0.000714	0.000716	1.00
4.074	522.0	487.6	1.023	0.000794	0.000708	1.12
4.204	518.0	488.6	0.787	0.000757	0.000710	1.07
4.428	511.5	491.5	0.702	0.000765	0.000716	1.07
4.652	518.0	488.7	0.872	0.000760	0.000710	1.07
4.876	511.4	491.4	0.659	0.000729	0.000716	1.02
5.100	518.1	488.7	0.979	0.000746	0.000710	1.05

NOMINAL SHOCK GENERATOR ANGLE= 8 DEGREES  
X=7.093 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.110	502.0	493.7	1.129	0.001542	0.000722	2.14
0.212	511.0	491.0	1.550	0.001680	0.000716	2.35
0.334	506.5	495.4	1.215	0.001490	0.000721	2.07
0.436	518.5	488.1	1.565	0.001483	0.000710	2.09
0.558	502.1	493.7	1.022	0.001260	0.000722	1.75
0.660	511.0	491.0	1.258	0.001312	0.000716	1.83
0.782	506.5	495.3	1.023	0.001235	0.000721	1.71
0.788	516.5	489.4	1.343	0.001285	0.000712	1.80
0.884	518.4	488.0	1.345	0.001241	0.000710	1.75
1.006	502.1	493.6	0.766	0.001010	0.000722	1.40
1.012	511.3	494.1	1.086	0.001083	0.000717	1.51
1.108	511.0	490.8	1.130	0.001102	0.000716	1.54
1.236	516.4	489.3	0.981	0.001099	0.000712	1.54
1.332	518.3	488.0	1.299	0.001061	0.000710	1.49
1.460	511.2	494.1	0.937	0.000887	0.000717	1.24
1.556	510.9	490.8	0.766	0.000873	0.000716	1.22
1.684	516.3	489.3	1.022	0.000897	0.000712	1.26
1.788	518.3	489.2	0.895	0.000791	0.000711	1.11
1.908	511.0	494.1	0.787	0.000707	0.000717	0.99
2.012	512.4	492.3	0.789	0.000704	0.000716	0.98
2.132	516.3	489.2	0.852	0.000769	0.000712	1.08
2.236	518.2	489.1	0.829	0.000711	0.000711	1.00
2.288	522.4	490.6	0.916	0.000711	0.000709	1.00
2.356	511.1	494.1	0.659	0.000632	0.000717	0.88
2.460	512.3	492.3	0.702	0.000675	0.000716	0.94
2.512	520.8	487.8	0.831	0.000735	0.000708	1.04
2.684	518.3	489.2	0.809	0.000720	0.000711	1.01
2.736	522.4	490.6	0.766	0.000733	0.000709	1.03



## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
2.908	512.3	492.2	0.744	0.000702	0.000716	0.98
2.960	520.8	487.7	0.896	0.000779	0.000708	1.10
3.132	518.2	489.2	0.895	0.000711	0.000711	1.00
3.184	522.5	490.6	0.939	0.000767	0.000709	1.08
3.356	512.3	492.3	0.681	0.000668	0.000716	0.93
3.408	520.8	487.8	0.959	0.000764	0.000708	1.08
3.538	516.6	487.7	0.703	0.000693	0.000711	0.98
3.632	522.5	490.6	1.022	0.000767	0.000709	1.08
3.762	511.1	492.2	0.659	0.000698	0.000716	0.98
3.856	520.9	487.7	1.001	0.000833	0.000708	1.18
3.986	516.6	487.7	0.957	0.000756	0.000711	1.06
4.210	511.1	492.1	0.809	0.000751	0.000716	1.05
4.434	516.5	487.8	0.829	0.000746	0.000711	1.05
4.658	510.9	492.1	0.808	0.000715	0.000716	1.00
4.882	516.5	487.8	0.681	0.000696	0.000711	0.98

NOMINAL SHOCK GENERATOR ANGLE=10 DEGREES  
X=7.099 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.204	514.0	485.7	1.982	0.001991	0.000711	2.80
0.428	506.5	489.2	1.458	0.001527	0.000717	2.13
0.556	513.0	487.8	1.471	0.001423	0.000713	2.00
0.652	513.8	485.6	1.572	0.001523	0.000711	2.14
0.780	507.8	493.1	0.937	0.001336	0.000719	1.86
0.876	506.2	489.0	1.131	0.001265	0.000717	1.76
1.004	512.7	487.8	1.000	0.001308	0.000713	1.84
1.100	513.7	485.6	1.393	0.001273	0.000711	1.79
1.228	507.8	493.0	1.044	0.001098	0.000719	1.53
1.324	506.2	489.0	0.852	0.001021	0.000717	1.42
1.452	512.6	487.8	1.105	0.001100	0.000713	1.54
1.556	514.6	490.5	1.166	0.001103	0.000713	1.55
1.676	507.5	493.0	0.851	0.000926	0.000719	1.29
1.780	509.7	490.9	0.917	0.001035	0.000716	1.45
1.900	512.4	487.7	0.893	0.000885	0.000713	1.24
2.004	514.3	490.2	1.023	0.000859	0.000713	1.20
2.056	520.0	489.0	1.023	0.000918	0.000709	1.30
2.124	507.4	493.0	0.574	0.000668	0.000719	0.93
2.228	509.5	490.9	0.724	0.000709	0.000717	0.99
2.280	517.8	486.3	0.979	0.000756	0.000709	1.07
2.452	514.1	490.2	0.617	0.000602	0.000714	0.84
2.504	520.0	488.9	0.723	0.000706	0.000709	1.00
2.676	509.1	490.9	0.553	0.000616	0.000717	0.86
2.728	517.8	486.3	0.787	0.000679	0.000709	0.96
2.900	514.2	490.1	0.617	0.000631	0.000713	0.89
2.952	520.0	488.9	0.874	0.000736	0.000709	1.04
3.124	509.4	490.9	0.596	0.000648	0.000717	0.90
3.176	517.8	486.2	0.787	0.000682	0.000709	0.96

## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
3.306	513.6	485.5	0.744	0.000644	0.000711	0.91
3.400	520.0	489.0	1.002	0.000744	0.000709	1.05
3.530	508.4	491.4	0.700	0.000648	0.000717	0.90
3.624	517.8	486.2	0.851	0.000741	0.000709	1.05
3.754	513.6	485.5	0.722	0.000746	0.000711	1.05
3.978	508.6	491.5	0.659	0.000693	0.000717	0.97
4.202	513.6	485.6	0.829	0.000746	0.000711	1.05
4.426	508.3	491.4	0.530	0.000660	0.000718	0.92
4.650	513.6	485.6	0.893	0.000717	0.000711	1.01

NOMINAL SHOCK GENERATOR ANGLE=12 DEGREES  
X=7.104 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.197	504.9	489.9	1.651	0.002034	0.000719	2.83
0.325	508.9	488.9	1.699	0.001841	0.000716	2.57
0.421	510.5	486.3	1.745	0.001866	0.000713	2.62
0.645	504.7	489.9	1.235	0.001559	0.000719	2.17
0.773	508.8	489.0	1.640	0.001631	0.000716	2.28
0.860	510.3	486.4	1.599	0.001569	0.000714	2.20
0.997	504.9	490.7	1.087	0.001267	0.000719	1.76
1.093	504.6	489.9	1.130	0.001254	0.000719	1.74
1.221	508.8	488.9	1.257	0.001312	0.000716	1.83
1.325	511.5	490.6	1.193	0.001198	0.000715	1.68
1.445	504.7	490.6	1.064	0.001131	0.000719	1.57
1.540	506.5	489.6	0.981	0.001251	0.000718	1.74
1.669	508.7	488.9	1.109	0.001172	0.000716	1.64
1.773	511.1	490.4	1.107	0.001076	0.000715	1.51
1.825	518.3	484.4	1.426	0.001148	0.000708	1.62
1.893	504.7	490.6	0.829	0.000930	0.000719	1.29
1.997	506.2	489.5	0.938	0.001015	0.000718	1.41
2.049	513.5	484.0	1.108	0.001033	0.000710	1.46
2.221	511.1	490.3	0.809	0.000843	0.000715	1.18
2.273	518.1	484.3	1.150	0.000946	0.000708	1.34
2.445	505.9	489.4	0.616	0.000709	0.000718	0.99
2.497	513.5	484.0	0.893	0.000778	0.000710	1.10
2.669	510.9	490.4	0.596	0.000559	0.000715	0.78
2.721	517.8	484.3	0.894	0.000689	0.000708	0.97
2.893	505.9	489.4	0.574	0.000593	0.000718	0.83
2.945	513.4	483.8	0.787	0.000636	0.000710	0.90
3.075	512.2	483.9	0.766	0.000664	0.000711	0.93
3.169	517.7	484.3	0.700	0.000644	0.000708	0.91
3.299	506.7	489.4	0.679	0.000637	0.000717	0.89
3.393	513.4	483.9	0.766	0.000634	0.000710	0.89
3.523	512.1	483.8	0.894	0.000662	0.000711	0.93
3.747	506.8	489.4	0.681	0.000621	0.000717	0.87
3.971	512.3	483.9	0.786	0.000713	0.000711	1.00



## SURFACE HEAT TRANSFER DATA

NOMINAL SHOCK GENERATOR ANGLE=14 DEGREES  
X=7.107 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.094	505.1	486.6	1.791	0.002012	0.000717	2.81
0.190	508.0	484.0	2.140	0.002266	0.000714	3.17
0.414	501.5	487.3	1.493	0.001829	0.000719	2.54
0.542	505.1	486.5	1.789	0.001873	0.000717	2.61
0.638	507.9	484.0	1.898	0.001970	0.000714	2.76
0.766	503.2	490.4	1.255	0.001542	0.000720	2.14
0.862	501.5	487.2	1.193	0.001503	0.000719	2.09
0.990	505.1	486.5	1.493	0.001609	0.000717	2.24
1.094	507.4	489.0	1.418	0.001516	0.000717	2.12
1.214	503.1	490.3	1.127	0.001313	0.000720	1.82
1.318	504.1	490.6	1.498	0.001507	0.000720	2.09
1.438	505.0	486.5	1.279	0.001364	0.000717	1.90
1.542	507.1	488.9	1.173	0.001343	0.000717	1.87
1.594	512.2	483.3	1.556	0.001428	0.000711	2.01
1.662	503.1	490.4	1.000	0.001145	0.000720	1.59

NOMINAL SHOCK GENERATOR ANGLE= 2 DEGREES  
X=7.570 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.077	508.5	496.0	0.724	0.000836	0.000720	1.16
0.301	506.6	495.9	0.809	0.000952	0.000721	1.32
0.525	508.3	496.0	0.659	0.000860	0.000720	1.20
0.627	520.3	489.3	0.968	0.000875	0.000710	1.23
0.749	506.3	495.7	0.681	0.000822	0.000721	1.14
0.851	514.2	487.2	1.023	0.000890	0.000712	1.25
0.973	508.3	496.1	0.788	0.000801	0.000720	1.11
1.075	520.3	489.2	1.001	0.000823	0.000709	1.16
1.197	506.4	495.6	0.553	0.000752	0.000721	1.04
1.299	514.1	487.3	0.915	0.000779	0.000712	1.09
1.427	517.6	492.2	0.744	0.000739	0.000713	1.04
1.523	520.3	489.3	0.959	0.000808	0.000710	1.14
1.651	509.6	486.6	0.722	0.000760	0.000714	1.06
1.747	514.1	487.2	0.915	0.000784	0.000712	1.10
1.875	517.6	492.3	0.851	0.000784	0.000713	1.10
1.971	520.3	489.3	0.917	0.000775	0.000710	1.09
2.099	509.4	486.5	0.829	0.000747	0.000714	1.05
2.195	514.1	487.3	0.789	0.000742	0.000712	1.04
2.323	517.6	492.3	0.874	0.000808	0.000713	1.13
2.427	517.8	488.3	0.916	0.000777	0.000710	1.10
2.547	509.5	486.5	0.809	0.000814	0.000714	1.14
2.771	517.6	492.3	0.703	0.000840	0.000713	1.18
2.875	517.9	488.2	0.936	0.000796	0.000710	1.12
2.927	523.1	492.8	0.895	0.000812	0.000710	1.14
2.995	509.6	486.6	0.765	0.000746	0.000714	1.04

## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
3.151	520.5	489.8	0.959	0.000804	0.000710	1.13
3.323	517.9	488.2	0.893	0.000746	0.000710	1.05
3.375	523.0	492.9	0.894	0.000768	0.000710	1.08
3.547	513.5	490.7	0.745	0.000815	0.000714	1.14
3.599	520.5	489.7	0.894	0.000764	0.000710	1.08
3.771	517.9	488.2	0.936	0.000702	0.000710	0.99
3.823	523.1	492.9	0.917	0.000752	0.000710	1.06
3.995	513.5	490.7	0.768	0.000753	0.000714	1.05
4.047	520.5	489.7	0.872	0.000731	0.000710	1.03
4.177	516.6	489.9	0.830	0.000751	0.000712	1.06
4.271	523.1	492.9	0.981	0.000747	0.000710	1.05
4.401	512.9	490.5	0.939	0.000813	0.000714	1.14
4.495	520.4	489.7	0.896	0.000759	0.000710	1.07
4.625	516.7	489.9	1.000	0.000783	0.000712	1.10
4.840	512.8	490.5	0.809	0.000797	0.000714	1.12
5.073	516.6	489.9	0.851	0.000788	0.000712	1.11
5.297	512.8	490.5	0.638	0.000787	0.000714	1.10
5.521	516.6	490.0	0.978	0.000722	0.000712	1.01

NOMINAL SHOCK GENERATOR ANGLE = 4 DEGREES  
X = 7.579 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.055	505.1	494.7	0.702	0.000878	0.000721	1.22
0.279	508.2	495.8	0.939	0.001185	0.000720	1.65
0.381	522.2	488.3	1.464	0.001154	0.000708	1.63
0.503	505.1	494.7	0.765	0.000953	0.000721	1.32
0.605	513.0	489.4	1.114	0.001046	0.000714	1.47
0.727	508.3	495.8	0.852	0.000969	0.000720	1.35
0.829	522.0	488.0	1.258	0.001000	0.000708	1.41
0.951	505.2	494.7	0.873	0.000855	0.000721	1.19
1.053	512.8	489.2	0.896	0.000866	0.000714	1.21
1.175	508.3	496.1	0.787	0.000717	0.000720	1.00
1.181	518.3	491.0	0.959	0.000851	0.000712	1.20
1.277	522.0	488.0	0.959	0.000867	0.000708	1.23
1.405	510.5	488.3	0.851	0.000872	0.000715	1.22
1.501	512.8	489.2	0.766	0.000768	0.000714	1.08
1.629	518.4	491.0	0.893	0.000784	0.000711	1.10
1.725	522.1	487.9	1.023	0.000768	0.000708	1.09
1.853	510.4	488.2	0.787	0.000749	0.000715	1.05
1.949	512.8	489.2	0.661	0.000686	0.000714	0.96
2.077	518.3	491.0	0.831	0.000805	0.000712	1.13
2.181	520.6	488.6	0.981	0.000786	0.000709	1.11
2.301	510.4	488.2	0.788	0.000785	0.000715	1.10
2.405	513.2	491.3	0.873	0.000865	0.000715	1.21
2.525	518.3	491.0	0.767	0.000837	0.000712	1.18
2.629	520.6	488.6	0.916	0.000849	0.000709	1.20
2.681	524.6	491.2	1.045	0.000839	0.000708	1.19



## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
2.749	510.4	488.2	0.829	0.000734	0.000715	1.03
2.853	513.1	491.1	0.829	0.000774	0.000715	1.08
2.905	522.3	488.5	1.007	0.000862	0.000708	1.22
3.077	520.5	488.6	0.896	0.000779	0.000709	1.10
3.129	524.4	491.1	0.959	0.000804	0.000708	1.14
3.301	513.0	490.8	0.852	0.000735	0.000714	1.03
3.353	522.1	488.3	0.938	0.000788	0.000708	1.11
3.525	520.5	488.5	0.980	0.000729	0.000709	1.03
3.577	524.6	491.1	0.937	0.000776	0.000708	1.10
3.801	522.1	488.3	1.322	0.000800	0.000708	1.13
3.931	518.3	489.0	0.893	0.000735	0.000710	1.04
3.931	513.4	486.8	0.829	0.000732	0.000712	1.03
4.025	524.6	491.1	1.044	0.000762	0.000708	1.08
4.155	508.3	493.1	0.660	0.000746	0.000718	1.04
4.155	512.4	491.1	0.808	0.000807	0.000715	1.13
4.249	522.3	488.4	0.981	0.000812	0.000708	1.15
4.379	518.3	488.9	0.851	0.000769	0.000710	1.08
4.379	513.3	486.7	0.723	0.000771	0.000712	1.08
4.603	512.2	491.0	0.788	0.000751	0.000715	1.05
4.603	508.0	493.0	0.681	0.000752	0.000719	1.05
4.827	513.4	486.8	0.893	0.000748	0.000712	1.05
4.827	518.3	489.0	0.914	0.000762	0.000710	1.07
5.051	512.1	491.1	0.703	0.000751	0.000715	1.05
5.051	507.6	492.9	0.446	0.000691	0.000719	0.96
5.275	518.4	489.0	0.681	0.000733	0.000710	1.03
5.275	513.4	486.8	0.510	0.000709	0.000712	1.00

NOMINAL SHOCK GENERATOR ANGLE = 6 DEGREES  
X=7.587 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.055	507.3	495.9	0.872	0.001004	0.000720	1.39
0.279	504.3	494.4	1.001	0.001309	0.000721	1.82
0.381	512.4	490.3	1.407	0.001384	0.000715	1.94
0.503	507.6	496.0	0.916	0.001172	0.000720	1.63
0.605	520.6	488.1	1.394	0.001269	0.000709	1.79
0.727	504.2	494.3	0.851	0.001039	0.000721	1.44
0.829	512.3	490.4	1.002	0.001047	0.000715	1.47
0.951	507.3	495.9	0.681	0.000931	0.000720	1.29
0.957	517.9	490.0	1.108	0.001073	0.000711	1.51
1.053	520.6	488.1	1.222	0.001090	0.000709	1.54
1.181	510.2	489.3	1.002	0.001001	0.000715	1.40
1.277	512.2	490.4	0.702	0.000887	0.000715	1.24
1.405	517.7	490.0	1.043	0.000915	0.000711	1.29
1.501	520.6	488.1	1.301	0.000883	0.000709	1.25
1.629	509.8	489.3	0.766	0.000780	0.000715	1.09
1.725	512.1	490.4	0.723	0.000718	0.000715	1.00
1.853	517.9	490.0	0.959	0.000842	0.000711	1.18

## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
1.957	518.8	489.2	0.916	0.000786	0.000710	1.11
2.077	509.6	489.3	0.659	0.000737	0.000716	1.03
2.181	513.0	492.3	0.809	0.000791	0.000715	1.11
2.301	517.8	490.0	0.768	0.000779	0.000711	1.10
2.405	518.8	489.1	0.574	0.000766	0.000710	1.08
2.457	524.8	490.9	0.937	0.000812	0.000708	1.15
2.525	509.8	489.3	0.723	0.000659	0.000716	0.92
2.629	513.0	492.1	0.766	0.000745	0.000715	1.04
2.681	522.0	487.6	1.045	0.000834	0.000708	1.18
2.853	518.8	489.2	0.852	0.000756	0.000710	1.07
2.905	524.6	490.8	0.872	0.000758	0.000708	1.07
3.077	512.9	492.0	0.765	0.000718	0.000715	1.00
3.129	522.0	487.6	0.936	0.000755	0.000708	1.07
3.301	518.8	489.2	0.724	0.000682	0.000710	0.96
3.353	524.7	490.8	0.938	0.000774	0.000708	1.09
3.525	513.0	492.1	0.702	0.000675	0.000715	0.94
3.577	521.9	487.5	0.978	0.000718	0.000708	1.01
3.707	518.0	488.6	0.787	0.000705	0.000710	0.99
3.801	524.6	490.8	1.022	0.000779	0.000708	1.10
3.931	511.5	491.5	0.723	0.000773	0.000716	1.08
4.025	522.0	487.6	1.002	0.000786	0.000708	1.11
4.155	518.0	488.6	0.808	0.000738	0.000710	1.04
4.379	511.4	491.4	0.701	0.000760	0.000716	1.06
4.603	518.0	488.6	0.894	0.000753	0.000710	1.06
4.827	511.5	491.4	0.659	0.000760	0.000716	1.06
5.051	518.0	488.6	0.873	0.000696	0.000710	0.98

NOMINAL SHOCK GENERATOR ANGLE = 8 DEGREES  
X = 7.593 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.145	511.0	491.0	1.550	0.001764	0.000716	2.46
0.267	506.6	495.5	1.278	0.001582	0.000721	2.19
0.369	518.5	488.1	1.669	0.001621	0.000710	2.28
0.491	502.1	493.7	0.959	0.001319	0.000722	1.83
0.593	511.0	491.0	1.321	0.001348	0.000716	1.88
0.715	506.4	495.3	0.809	0.001200	0.000721	1.66
0.721	516.5	489.4	1.493	0.001372	0.000712	1.93
0.817	518.4	488.0	1.396	0.001278	0.000710	1.80
0.945	511.4	494.1	1.130	0.001280	0.000717	1.79
1.041	510.9	490.8	1.107	0.001160	0.000716	1.62
1.169	516.5	489.3	1.299	0.001175	0.000712	1.65
1.265	518.2	488.1	1.278	0.001029	0.000710	1.45
1.393	511.2	494.1	0.895	0.001001	0.000717	1.40
1.489	510.8	490.8	0.872	0.000892	0.000716	1.25
1.617	516.5	489.3	0.980	0.000999	0.000712	1.40
1.721	518.3	489.3	0.959	0.000907	0.000711	1.28
1.841	511.1	494.1	0.766	0.000832	0.000717	1.16



## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
1.945	512.4	492.2	0.768	0.000882	0.000716	1.23
2.065	516.3	489.3	0.852	0.000806	0.000712	1.13
2.169	518.2	489.1	0.744	0.000738	0.000711	1.04
2.221	522.5	490.6	0.895	0.000755	0.000709	1.06
2.289	511.0	494.1	0.532	0.000625	0.000717	0.87
2.393	512.3	492.3	0.681	0.000707	0.000716	0.99
2.445	520.8	487.7	0.981	0.000801	0.000708	1.13
2.617	518.2	489.1	0.744	0.000667	0.000711	0.94
2.669	522.4	490.5	0.830	0.000718	0.000709	1.01
2.841	512.3	492.1	0.765	0.000702	0.000716	0.98
2.893	520.8	487.8	0.937	0.000765	0.000708	1.08
3.065	518.2	489.1	0.744	0.000663	0.000711	0.93
3.117	522.5	490.6	0.853	0.000722	0.000709	1.02
3.341	520.8	487.8	0.768	0.000735	0.000708	1.04
3.471	516.6	487.7	0.702	0.000669	0.000711	0.94
3.565	522.5	490.6	0.832	0.000732	0.000709	1.03
3.695	511.1	492.1	0.787	0.000774	0.000716	1.08
3.789	520.8	487.8	0.896	0.000760	0.000708	1.07
3.919	516.6	487.7	0.765	0.000740	0.000711	1.04
4.143	511.1	492.2	0.744	0.000764	0.000716	1.07
4.367	516.6	487.8	0.850	0.000722	0.000711	1.02
4.591	510.9	492.1	0.703	0.000750	0.000716	1.05
4.815	516.6	487.8	0.660	0.000691	0.000711	0.97

NOMINAL SHOCK GENERATOR ANGLE= 10 DEGREES  
X=7.599 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.119	513.9	485.7	1.950	0.001930	0.000711	2.71
0.343	506.5	489.1	1.498	0.001687	0.000717	2.35
0.471	513.0	487.7	1.598	0.001551	0.000713	2.18
0.567	513.9	485.7	1.638	0.001587	0.000711	2.23
0.695	507.8	493.2	1.173	0.001520	0.000719	2.11
0.791	506.3	489.1	0.959	0.001339	0.000717	1.87
0.919	512.7	487.8	1.407	0.001329	0.000713	1.86
1.015	513.6	485.6	1.429	0.001225	0.000711	1.72
1.143	507.8	493.0	0.980	0.001199	0.000719	1.67
1.367	512.8	487.8	1.279	0.001168	0.000713	1.64
1.471	514.6	490.5	1.281	0.001230	0.000713	1.73
1.591	507.5	492.9	0.872	0.001007	0.000719	1.40
1.815	512.5	487.8	0.915	0.000920	0.000713	1.29
1.919	514.2	490.2	1.172	0.001010	0.000713	1.42
1.971	520.1	489.1	1.238	0.001075	0.000710	1.51
2.039	507.5	493.0	0.723	0.000784	0.000719	1.09
2.143	509.6	490.9	0.896	0.000908	0.000717	1.27
2.195	517.8	486.3	1.109	0.000968	0.000709	1.37
2.367	514.2	490.1	0.746	0.000698	0.000713	0.98
2.419	519.9	488.9	0.915	0.000798	0.000709	1.13

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PRINCETON UNIV N J GAS DYNAMICS LAB

F/G 20/4

OBLIQUE SHOCK WAVE/TURBULENT BOUNDARY LAYER INTERACTIONS IN THR--ETC(U)

MAR 78 B OSKAM, I E VAS, S M BOGDONOFF

F33615-75-C-3126

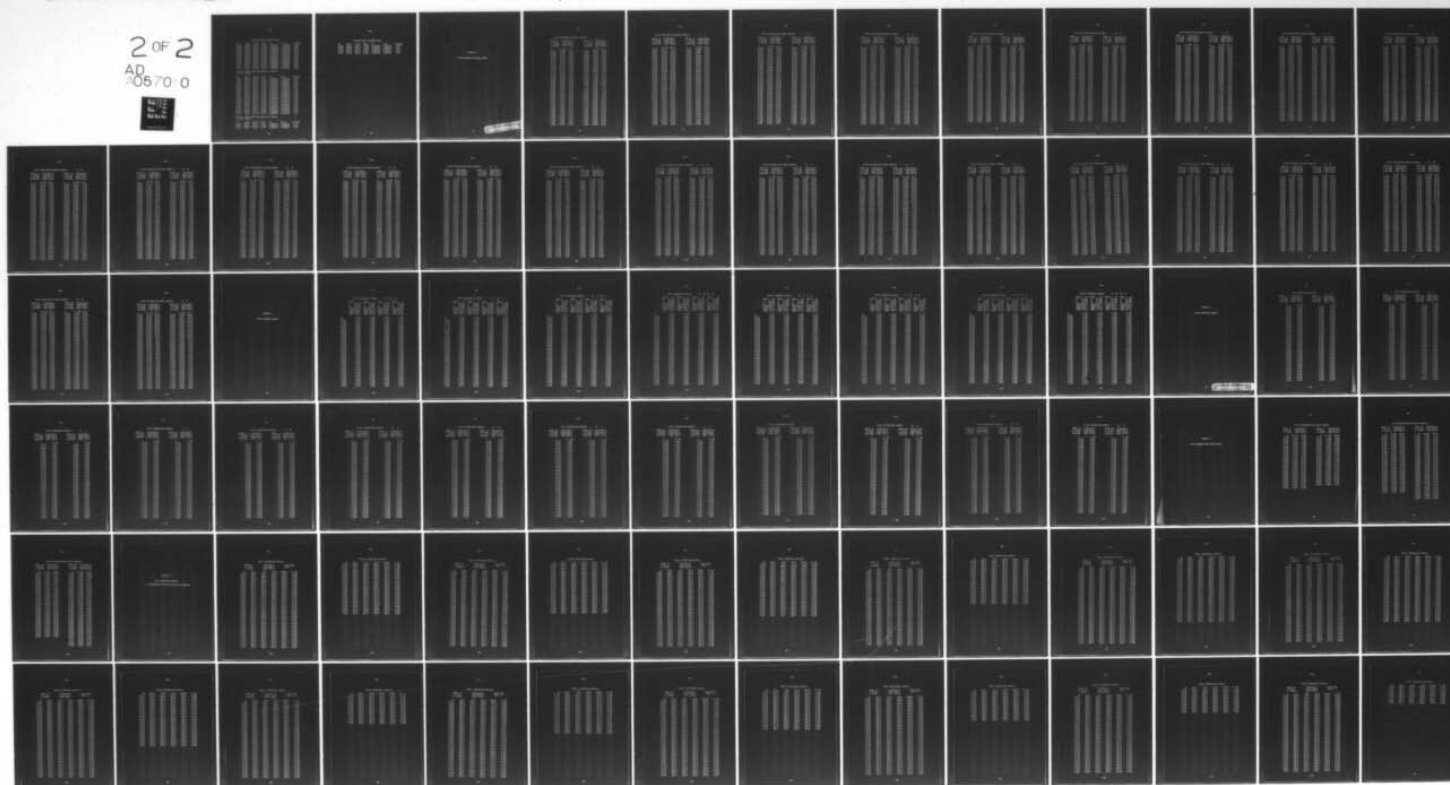
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## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
2.591	509.0	490.9	0.809	0.000604	0.000717	0.84
2.642	517.8	486.2	0.851	0.000673	0.000709	0.95
2.815	514.2	490.3	0.468	0.000535	0.000713	0.75
2.867	520.0	488.9	0.832	0.000690	0.000709	0.97
3.039	509.2	490.9	0.596	0.000578	0.000717	0.81
3.091	517.8	486.2	0.872	0.000671	0.000709	0.95
3.221	513.6	485.5	0.723	0.000636	0.000711	0.90
3.315	519.9	488.9	0.617	0.000678	0.000709	0.96
3.445	508.5	491.4	0.532	0.000652	0.000717	0.91
3.539	517.8	486.3	0.787	0.000674	0.000709	0.95
3.669	513.5	485.4	0.766	0.000679	0.000711	0.96
3.892	508.3	491.4	0.659	0.000674	0.000717	0.94
4.117	513.5	485.6	0.788	0.000704	0.000711	0.99
4.565	513.5	485.6	0.639	0.000685	0.000711	0.96

NOMINAL SHOCK GENERATOR ANGLE=12 DEGREES  
X=7.604 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.092	504.8	490.0	1.407	0.001723	0.000719	2.40
0.220	508.9	488.9	1.843	0.002070	0.000716	2.89
0.316	510.5	486.4	1.820	0.001947	0.000713	2.73
0.444	505.1	490.7	1.599	0.001787	0.000719	2.49
0.540	504.7	490.0	1.342	0.001614	0.000719	2.25
0.668	508.8	489.0	1.555	0.001675	0.000716	2.34
0.764	510.3	486.4	1.661	0.001525	0.000714	2.14
0.892	504.9	490.7	1.235	0.001411	0.000719	1.96
1.116	508.8	489.0	1.257	0.001389	0.000716	1.94
1.220	511.5	490.6	1.321	0.001358	0.000715	1.90
1.340	504.8	490.6	1.063	0.001179	0.000719	1.64
1.564	508.8	489.0	1.195	0.001228	0.000716	1.72
1.668	511.2	490.5	1.194	0.001180	0.000715	1.65
1.720	518.3	484.4	1.555	0.001247	0.000708	1.76
1.789	504.7	490.6	0.829	0.000987	0.000719	1.37
1.892	506.3	489.6	1.109	0.001189	0.000718	1.66
1.944	513.7	484.1	1.407	0.001274	0.000710	1.79
2.116	511.1	490.3	0.851	0.000939	0.000715	1.31
2.169	518.2	484.3	1.319	0.001079	0.000708	1.52
2.340	505.9	489.5	0.659	0.000889	0.000718	1.24
2.392	513.6	484.0	1.130	0.000993	0.000710	1.40

NOMINAL SHOCK GENERATOR ANGLE=14 DEGREES  
X=7.607 INCHES

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.067	507.7	484.0	1.747	0.001777	0.000714	2.49
0.195	503.3	490.4	1.534	0.002017	0.000720	2.80
0.410	505.1	486.5	1.725	0.001986	0.000717	2.77

## SURFACE HEAT TRANSFER DATA

YG	TWALL	TSTAG	QDOT	CH	CHVD	CH/CHVD
0.515	507.8	484.0	1.555	0.001820	0.000714	2.55
0.867	505.1	486.5	1.620	0.001772	0.000717	2.47
0.971	507.6	489.1	1.505	0.001720	0.000717	2.40
1.315	505.1	486.5	1.067	0.001460	0.000717	2.04
1.471	512.3	483.3	1.697	0.001617	0.000711	2.27



## PITOT PRESSURE-YAW ANGLE SURVEYS

APPENDIX D

PITOT PRESSURE-YAW ANGLE SURVEYS

D-1

PITOT PRESSURE-YAW ANGLE SURVEYS

1 2

NSGA= 0 TSTAG=449.3  
X =3.561 TWALL=502.7  
Y =3.900 TGEN =433.4  
YG=3.900 TIME = 50.4

NSGA= 0 TSTAG=457.2  
X =3.561 TWALL=508.0  
Y =4.900 TGEN =440.3  
YG=4.900 TIME =253.5

Z	PT BAR	ALFA
0.010	0.194	-0.29
0.025	0.280	0.06
0.040	0.327	0.32
0.055	0.360	0.28
0.070	0.387	0.24
0.085	0.411	0.06
0.100	0.432	-0.05
0.130	0.473	0.08
0.160	0.508	0.03
0.190	0.545	0.11
0.220	0.581	0.18
0.250	0.621	0.15
0.280	0.660	0.24
0.310	0.697	0.29
0.340	0.732	0.28
0.370	0.770	0.31
0.400	0.808	0.29
0.430	0.846	0.26
0.460	0.883	0.28
0.490	0.915	0.29
0.520	0.943	0.31
0.550	0.962	0.30
0.580	0.974	0.33
0.620	0.984	0.34
0.680	0.989	0.33
0.740	0.993	0.31
0.800	0.995	0.29
0.860	0.996	0.28
0.920	0.997	0.25
0.980	1.001	0.22
1.040	1.001	0.19
1.100	1.001	0.19
1.160	1.001	0.18
1.220	1.001	0.17
1.280	1.001	0.18
1.340	1.002	0.18
1.400	1.001	0.18
1.460	1.001	0.18
1.520	1.000	0.16
1.580	0.999	0.16
1.640	0.999	0.15
1.700	0.998	0.12
1.760	0.998	0.08
1.820	0.999	0.03

Z	PT BAR	ALFA
0.010	0.217	-0.98
0.025	0.298	-0.42
0.040	0.343	-0.25
0.055	0.373	-0.31
0.070	0.397	-0.35
0.085	0.420	-0.34
0.100	0.443	-0.33
0.130	0.484	-0.28
0.160	0.524	-0.28
0.190	0.564	-0.32
0.220	0.598	-0.32
0.250	0.637	-0.26
0.280	0.681	-0.24
0.310	0.720	-0.18
0.340	0.762	-0.12
0.370	0.803	-0.11
0.400	0.842	-0.09
0.430	0.881	-0.11
0.460	0.915	-0.07
0.490	0.946	-0.08
0.520	0.971	-0.05
0.550	0.981	0.0
0.580	0.984	0.02
0.620	0.988	0.01
0.680	0.987	0.02
0.740	0.989	0.02
0.800	0.990	0.02
0.860	0.992	0.02
0.920	0.992	-0.01
0.980	0.994	-0.02
1.040	0.995	-0.02
1.100	0.994	-0.03
1.160	0.995	-0.05
1.220	0.995	-0.07
1.280	0.996	-0.07
1.340	0.996	-0.09
1.400	0.996	-0.10
1.460	0.996	-0.13
1.520	0.997	-0.15
1.580	0.997	-0.19
1.640	0.997	-0.22
1.700	0.996	-0.25
1.760	0.996	-0.27
1.820	0.996	-0.33



## PITOT PRESSURE-YAW ANGLE SURVEYS

3

4

NSGA= 0 TSTAG=447.4  
 X =3.561 TWALL=490.1  
 Y =2.900 TGEN =420.9  
 YG=2.900 TIME =289.3

NSGA= 0 TSTAG=458.2  
 X =3.561 TWALL=508.3  
 Y =5.400 TGEN =440.4  
 YG=5.400 TIME =266.4

Z	PT BAR	ALFA
0.010	0.178	-1.28
0.025	0.302	-0.51
0.040	0.353	-0.29
0.055	0.382	-0.29
0.070	0.410	-0.37
0.085	0.433	-0.33
0.100	0.455	-0.30
0.130	0.496	-0.26
0.160	0.540	-0.32
0.190	0.577	-0.33
0.220	0.613	-0.31
0.250	0.656	-0.29
0.280	0.699	-0.25
0.310	0.739	-0.21
0.340	0.781	-0.28
0.370	0.825	-0.28
0.400	0.862	-0.28
0.430	0.898	-0.28
0.460	0.931	-0.29
0.490	0.957	-0.26
0.520	0.976	-0.27
0.550	0.983	-0.25
0.580	0.986	-0.22
0.620	0.988	-0.18
0.680	0.988	-0.14
0.740	0.991	-0.14
0.800	0.993	-0.15
0.860	0.996	-0.17
0.920	0.997	-0.17
0.980	0.999	-0.21
1.040	1.001	-0.21
1.100	1.001	-0.21
1.160	1.001	-0.21
1.220	1.001	-0.22
1.280	1.002	-0.24
1.340	1.003	-0.26
1.400	1.003	-0.25
1.460	1.003	-0.22
1.520	1.002	-0.22
1.580	1.001	-0.19
1.640	0.999	-0.20
1.700	0.997	-0.21
1.760	0.996	-0.26
1.820	0.994	-0.31

Z	PT BAR	ALFA
0.010	0.208	-0.54
0.025	0.288	-0.37
0.040	0.336	-0.22
0.055	0.364	-0.13
0.070	0.388	-0.33
0.085	0.410	-0.27
0.100	0.432	-0.16
0.130	0.467	-0.23
0.160	0.503	-0.20
0.190	0.540	-0.15
0.220	0.577	-0.16
0.250	0.618	-0.13
0.280	0.660	-0.11
0.310	0.698	-0.10
0.340	0.735	-0.07
0.370	0.776	0.01
0.400	0.814	-0.04
0.430	0.852	-0.07
0.460	0.889	-0.12
0.490	0.921	-0.10
0.520	0.948	-0.07
0.550	0.967	-0.05
0.580	0.979	-0.05
0.620	0.984	-0.06
0.680	0.988	-0.03
0.740	0.989	-0.04
0.800	0.991	-0.05
0.860	0.992	-0.04
0.920	0.992	-0.06
0.980	0.992	-0.06
1.040	0.993	-0.06
1.100	0.993	-0.07
1.160	0.994	-0.07
1.220	0.995	-0.11
1.280	0.995	-0.13
1.340	0.996	-0.15
1.400	0.997	-0.16
1.460	0.998	-0.14
1.520	0.998	-0.16
1.580	1.000	-0.19
1.640	1.001	-0.20
1.700	1.001	-0.21
1.760	1.001	-0.21
1.820	0.999	-0.25

## PITOT PRESSURE-YAW ANGLE SURVEYS

5 13

NSGA= 0 TSTAG=446.2  
 X =3.561 TWALL=488.4  
 Y =2.400 TGEN =420.7  
 YG=2.400 TIME =328.6

NSGA= 4 TSTAG=457.6  
 X =7.579 TWALL=501.3  
 Y =0.709 TGEN =436.1  
 YG=0.215 TIME =152.8

Z	PT BAR	ALFA
0.010	0.213	-0.20
0.025	0.291	0.06
0.040	0.337	0.18
0.055	0.372	0.14
0.070	0.400	0.03
0.085	0.430	-0.08
0.100	0.453	-0.03
0.130	0.493	-0.10
0.160	0.530	-0.05
0.190	0.568	0.01
0.220	0.605	-0.10
0.250	0.645	-0.08
0.280	0.690	-0.09
0.310	0.726	-0.11
0.340	0.765	-0.15
0.370	0.804	-0.11
0.400	0.842	-0.11
0.430	0.878	-0.11
0.460	0.913	-0.07
0.490	0.945	-0.06
0.520	0.968	-0.03
0.550	0.976	-0.04
0.580	0.981	-0.02
0.620	0.982	-0.03
0.680	0.981	-0.01
0.740	0.982	-0.01
0.800	0.985	-0.02
0.860	0.983	-0.01
0.920	0.983	-0.02
0.980	0.983	-0.02
1.040	0.983	-0.02
1.100	0.981	-0.03
1.160	0.980	-0.06
1.220	0.978	-0.06
1.280	0.976	-0.08
1.340	0.974	-0.10
1.400	0.974	-0.10
1.460	0.973	-0.11
1.520	0.973	-0.13
1.580	0.974	-0.11
1.640	0.975	-0.08
1.700	0.977	-0.09
1.760	0.978	-0.09
1.820	0.982	-0.19

Z	PT BAR	ALFA
0.010	0.298	5.89
0.025	0.463	5.92
0.040	0.561	5.69
0.055	0.602	5.10
0.070	0.647	4.88
0.085	0.688	4.83
0.100	0.717	4.93
0.130	0.766	5.05
0.160	0.816	5.02
0.190	0.855	5.01
0.220	0.896	4.76
0.250	0.936	4.60
0.280	0.974	4.39
0.310	1.013	4.18
0.340	1.055	4.22
0.370	1.084	4.00
0.400	1.105	3.92
0.430	1.124	3.82
0.460	1.158	3.60
0.490	1.181	3.61
0.520	1.170	3.71
0.550	1.164	3.72
0.580	1.160	3.68
0.620	1.160	3.59
0.680	1.160	3.54
0.740	1.161	3.51
0.800	1.172	3.60
0.860	1.168	3.54
0.920	1.162	3.53
0.980	1.160	3.49
1.040	1.161	3.47
1.100	1.161	3.50
1.160	1.163	3.51
1.220	1.162	3.52
1.280	1.164	3.42
1.340	1.167	3.37
1.400	1.167	3.38
1.460	1.170	3.48
1.520	1.172	3.47
1.580	1.176	3.44
1.640	1.178	3.49
1.700	1.178	3.49
1.760	1.178	3.49
1.820	1.178	3.49



## PITOT PRESSURE-YAW ANGLE SURVEYS

12 14

NSGA= 4 TSTAG=461.0  
 X =7.579 TWALL=510.5  
 Y =0.959 TGEN =448.4  
 YG=0.465 TIME =156.5

NSGA= 4 TSTAG=461.5  
 X =7.579 TWALL=493.8  
 Y =1.209 TGEN =440.3  
 YG=0.715 TIME =149.9

Z	PT BAR	ALFA
0.010	0.266	8.41
0.025	0.402	8.65
0.040	0.467	8.63
0.055	0.509	8.06
0.070	0.539	7.51
0.085	0.566	7.24
0.100	0.592	6.95
0.130	0.631	6.34
0.160	0.671	5.90
0.190	0.710	5.63
0.220	0.754	5.24
0.250	0.798	4.93
0.280	0.843	4.59
0.310	0.890	4.35
0.340	0.931	4.13
0.370	0.974	3.98
0.400	1.015	3.79
0.430	1.055	3.66
0.460	1.087	3.54
0.490	1.118	3.44
0.520	1.138	3.36
0.550	1.142	3.32
0.580	1.146	3.46
0.620	1.151	3.47
0.680	1.155	3.30
0.740	1.153	3.28
0.800	1.162	3.28
0.860	1.160	3.28
0.920	1.149	3.35
0.980	1.148	3.37
1.040	1.148	3.41
1.100	1.152	3.42
1.160	1.156	3.45
1.220	1.157	3.49
1.280	1.156	3.51
1.340	1.158	3.51
1.400	1.157	3.49
1.460	1.159	3.50
1.520	1.160	3.55
1.580	1.165	3.58
1.640	1.170	3.65
1.700	1.170	3.65
1.760	1.170	3.65
1.820	1.170	3.65

Z	PT BAR	ALFA
0.010	0.257	8.85
0.025	0.369	9.08
0.040	0.424	8.85
0.055	0.455	8.48
0.070	0.481	8.05
0.085	0.507	7.69
0.100	0.530	7.43
0.130	0.570	6.80
0.160	0.608	6.36
0.190	0.644	5.87
0.220	0.687	5.40
0.250	0.724	5.04
0.280	0.770	4.71
0.310	0.813	4.36
0.340	0.860	3.99
0.370	0.900	3.84
0.400	0.944	3.71
0.430	0.987	3.47
0.460	1.029	3.33
0.490	1.071	3.29
0.520	1.107	3.18
0.550	1.132	3.11
0.580	1.140	3.10
0.620	1.151	3.14
0.680	1.154	3.21
0.740	1.156	3.29
0.800	1.161	3.29
0.860	1.161	3.21
0.920	1.158	3.23
0.980	1.157	3.30
1.040	1.157	3.35
1.100	1.159	3.40
1.160	1.157	3.49
1.220	1.157	3.52
1.280	1.155	3.56
1.340	1.154	3.62
1.400	1.154	3.66
1.460	1.156	3.71
1.520	1.159	3.75
1.580	1.162	3.77
1.640	1.166	3.84
1.700	1.166	3.84
1.760	1.166	3.84
1.820	1.166	3.84

## PITOT PRESSURE-YAW ANGLE SURVEYS

11 15

NSGA= 4 TSTAG=466.3  
 X =7.579 TWALL=498.3  
 Y =1.459 TGEN =439.0  
 YG=0.965 TIME =152.9

NSGA= 4 TSTAG=462.2  
 X =7.579 TWALL=488.8  
 Y =1.709 TGEN =440.9  
 YG=1.215 TIME =176.3

Z	PT BAR	ALFA
0.010	0.242	9.75
0.025	0.342	9.76
0.040	0.393	9.65
0.055	0.427	9.11
0.070	0.449	8.67
0.085	0.470	8.30
0.100	0.491	8.02
0.130	0.529	7.33
0.160	0.565	6.74
0.190	0.600	6.17
0.220	0.638	5.70
0.250	0.678	5.34
0.280	0.715	4.86
0.310	0.758	4.73
0.340	0.797	4.30
0.370	0.837	4.21
0.400	0.883	3.83
0.430	0.922	3.80
0.460	0.970	3.58
0.490	1.014	3.46
0.520	1.056	3.33
0.550	1.094	3.29
0.580	1.114	3.20
0.620	1.137	3.16
0.680	1.149	3.22
0.740	1.161	3.25
0.800	1.170	3.29
0.860	1.166	3.27
0.920	1.162	3.26
0.980	1.160	3.39
1.040	1.161	3.31
1.100	1.159	3.30
1.160	1.157	3.34
1.220	1.158	3.38
1.280	1.158	3.45
1.340	1.160	3.49
1.400	1.167	3.47
1.460	1.169	3.49
1.520	1.171	3.57
1.580	1.162	3.58
1.640	1.162	3.58
1.700	1.162	3.58
1.760	1.162	3.58
1.820	1.162	3.58

Z	PT BAR	ALFA
0.010	0.251	10.49
0.025	0.337	10.34
0.040	0.380	9.92
0.055	0.406	9.47
0.070	0.429	8.99
0.085	0.449	8.54
0.100	0.466	8.14
0.130	0.501	7.40
0.160	0.534	6.68
0.190	0.570	6.23
0.220	0.607	5.60
0.250	0.642	5.29
0.280	0.680	4.89
0.310	0.720	4.53
0.340	0.757	4.25
0.370	0.804	4.01
0.400	0.845	3.80
0.430	0.880	3.65
0.460	0.927	3.43
0.490	0.974	3.29
0.520	1.009	3.19
0.550	1.059	3.11
0.580	1.086	3.02
0.620	1.118	3.21
0.680	1.146	3.22
0.740	1.154	3.26
0.800	1.168	3.31
0.860	1.161	3.33
0.920	1.156	3.41
0.980	1.153	3.44
1.040	1.151	3.47
1.100	1.149	3.50
1.160	1.150	3.50
1.220	1.154	3.47
1.280	1.160	3.47
1.340	1.164	3.50
1.400	1.163	3.54
1.460	1.162	3.56
1.520	1.158	3.51
1.580	1.158	3.51
1.640	1.161	3.54
1.700	1.161	3.55
1.760	1.161	3.55
1.820	1.161	3.55



## PITOT PRESSURE-YAW ANGLE SURVEYS

10 16

NSGA= 4 TSTAG=462.4  
 X =7.579 TWALL=500.6  
 Y =1.959 TGEN =436.9  
 YG=1.465 TIME =167.3

NSGA= 4 TSTAG=440.9  
 X =7.579 TWALL=494.2  
 Y =2.209 TGEN =417.1  
 YG=1.715 TIME =189.4

Z	PT BAR	ALFA
0.010	0.236	10.81
0.025	0.308	10.86
0.040	0.357	10.70
0.055	0.387	10.17
0.070	0.407	9.46
0.085	0.430	8.74
0.100	0.446	8.28
0.130	0.481	7.60
0.160	0.515	6.97
0.190	0.551	6.33
0.220	0.585	5.94
0.250	0.621	5.32
0.280	0.661	5.02
0.310	0.697	4.59
0.340	0.739	4.36
0.370	0.779	4.10
0.400	0.823	3.94
0.430	0.864	3.71
0.460	0.902	3.58
0.490	0.952	3.37
0.520	0.994	3.35
0.550	1.045	3.10
0.580	1.080	3.09
0.620	1.107	3.05
0.680	1.136	3.09
0.740	1.153	3.16
0.800	1.167	3.24
0.860	1.165	3.21
0.920	1.156	3.27
0.980	1.153	3.25
1.040	1.152	3.25
1.100	1.152	3.23
1.160	1.153	3.29
1.220	1.154	3.34
1.280	1.158	3.39
1.340	1.158	3.41
1.400	1.160	3.39
1.460	1.160	3.40
1.520	1.157	3.37
1.580	1.160	3.44
1.640	1.161	3.52
1.700	1.161	3.52
1.760	1.161	3.52
1.820	1.161	3.52

Z	PT BAR	ALFA
0.010	0.235	11.01
0.025	0.305	10.92
0.040	0.351	10.44
0.055	0.377	9.84
0.070	0.401	9.33
0.085	0.417	8.63
0.100	0.438	8.03
0.130	0.471	7.32
0.160	0.505	6.59
0.190	0.541	5.93
0.220	0.574	5.50
0.250	0.616	5.05
0.280	0.659	4.55
0.310	0.697	4.28
0.340	0.737	4.03
0.370	0.777	3.75
0.400	0.822	3.63
0.430	0.866	3.37
0.460	0.910	3.21
0.490	0.951	3.17
0.520	1.000	3.02
0.550	1.049	2.90
0.580	1.086	2.89
0.620	1.114	2.87
0.680	1.139	2.91
0.740	1.154	3.00
0.800	1.167	3.04
0.860	1.163	3.11
0.920	1.159	3.00
0.980	1.162	3.03
1.040	1.163	3.08
1.100	1.161	3.14
1.160	1.160	3.26
1.220	1.159	3.31
1.280	1.160	3.31
1.340	1.162	3.35
1.400	1.164	3.39
1.460	1.167	3.41
1.520	1.171	3.43
1.580	1.173	3.45
1.640	1.175	3.47
1.700	1.175	3.47
1.760	1.175	3.47
1.820	1.175	3.47

## PITOT PRESSURE-YAW ANGLE SURVEYS

9 17

NSGA= 4 TSTAG=470.9  
 X =7.579 TWALL=500.1  
 Y =2.459 TGEN =443.4  
 YG=1.965 TIME =289.5

NSGA= 4 TSTAG=455.4  
 X =7.579 TWALL=501.6  
 Y =2.709 TGEN =431.8  
 YG=2.215 TIME =154.0

Z	PT BAR	ALFA
0.010	0.243	11.15
0.025	0.310	11.08
0.040	0.352	10.63
0.055	0.376	9.74
0.070	0.397	8.96
0.085	0.416	8.46
0.100	0.432	8.00
0.130	0.468	7.16
0.160	0.504	6.34
0.190	0.537	5.70
0.220	0.575	5.25
0.250	0.618	4.86
0.280	0.654	4.45
0.310	0.696	4.19
0.340	0.739	3.96
0.370	0.783	3.70
0.400	0.826	3.57
0.430	0.868	3.40
0.460	0.914	3.20
0.490	0.961	3.06
0.520	1.006	3.03
0.550	1.050	2.99
0.580	1.083	2.97
0.620	1.118	2.88
0.680	1.136	2.96
0.740	1.155	3.02
0.800	1.169	2.98
0.860	1.165	3.08
0.920	1.163	3.12
0.980	1.164	3.08
1.040	1.166	3.07
1.100	1.168	3.12
1.160	1.166	3.14
1.220	1.164	3.28
1.280	1.166	3.36
1.340	1.169	3.40
1.400	1.171	3.40
1.460	1.173	3.43
1.520	1.173	3.47
1.580	1.175	3.64
1.640	1.176	3.70
1.700	1.180	3.78
1.760	1.185	3.85
1.820	1.185	3.85

Z	PT BAR	ALFA
0.010	0.237	11.32
0.025	0.292	10.78
0.040	0.332	10.20
0.055	0.362	9.51
0.070	0.383	8.85
0.085	0.403	8.33
0.100	0.420	7.68
0.130	0.457	6.82
0.160	0.495	6.21
0.190	0.531	5.50
0.220	0.577	4.86
0.250	0.616	4.70
0.280	0.656	4.26
0.310	0.700	4.10
0.340	0.739	3.78
0.370	0.790	3.57
0.400	0.834	3.45
0.430	0.880	3.32
0.460	0.922	3.21
0.490	0.966	3.01
0.520	1.010	3.04
0.550	1.058	2.97
0.580	1.090	2.94
0.620	1.114	2.95
0.680	1.135	2.99
0.740	1.155	3.07
0.800	1.171	3.15
0.860	1.163	3.21
0.920	1.163	3.27
0.980	1.167	3.28
1.040	1.173	3.34
1.100	1.169	3.36
1.160	1.170	3.43
1.220	1.171	3.56
1.280	1.176	3.62
1.340	1.180	3.67
1.400	1.185	3.73
1.460	1.187	3.84
1.520	1.188	3.98
1.580	1.189	4.14
1.640	1.191	4.06
1.700	1.193	4.08
1.760	1.193	4.08
1.820	1.193	4.08



## PITOT PRESSURE-YAW ANGLE SURVEYS

8 18

NSGA= 4 TSTAG=461.0  
 X =7.579 TWALL=498.3  
 Y =2.959 TGEN =436.6  
 YG=2.465 TIME =125.8

NSGA= 4 TSTAG=468.5  
 X =7.579 TWALL=498.4  
 Y =3.209 TGEN =441.7  
 YG=2.715 TIME =158.6

Z	PT BAR	ALFA
0.010	0.233	13.70
0.025	0.275	12.52
0.040	0.341	10.34
0.055	0.366	9.38
0.070	0.386	8.66
0.085	0.410	7.78
0.100	0.431	7.27
0.130	0.467	6.29
0.160	0.509	5.33
0.190	0.543	4.82
0.220	0.584	4.39
0.250	0.623	3.94
0.280	0.670	3.72
0.310	0.708	3.43
0.340	0.750	3.34
0.370	0.800	3.21
0.400	0.840	3.10
0.430	0.879	3.07
0.460	0.924	2.86
0.490	0.971	2.78
0.520	1.018	2.75
0.550	1.054	2.64
0.580	1.087	2.62
0.620	1.113	2.66
0.680	1.131	2.66
0.740	1.148	2.60
0.800	1.158	2.58
0.860	1.156	2.69
0.920	1.155	2.76
0.980	1.159	2.83
1.040	1.162	2.88
1.100	1.166	2.94
1.160	1.167	3.09
1.220	1.169	3.25
1.280	1.172	3.36
1.340	1.175	3.42
1.400	1.179	3.49
1.460	1.183	3.55
1.520	1.187	3.61
1.580	1.191	3.67
1.640	1.194	3.73
1.700	1.199	3.80
1.760	1.208	3.86
1.820	1.208	3.86

Z	PT BAR	ALFA
0.010	0.245	10.06
0.025	0.301	9.15
0.040	0.341	8.28
0.055	0.374	7.45
0.070	0.395	6.80
0.085	0.417	6.20
0.100	0.439	5.80
0.130	0.479	5.02
0.160	0.519	4.48
0.190	0.558	4.24
0.220	0.598	3.89
0.250	0.634	3.52
0.280	0.684	3.33
0.310	0.725	3.13
0.340	0.769	3.07
0.370	0.806	2.83
0.400	0.861	2.65
0.430	0.896	2.67
0.460	0.942	2.42
0.490	0.989	2.37
0.520	1.029	2.36
0.550	1.074	2.33
0.580	1.102	2.39
0.620	1.120	2.39
0.680	1.141	2.48
0.740	1.161	2.56
0.800	1.170	2.67
0.860	1.169	2.77
0.920	1.171	2.84
0.980	1.176	2.91
1.040	1.179	2.99
1.100	1.184	3.23
1.160	1.194	3.31
1.220	1.197	3.49
1.280	1.202	3.57
1.340	1.209	3.79
1.400	1.216	3.88
1.460	1.216	3.88
1.520	1.216	3.88
1.580	1.216	3.88
1.640	1.216	3.88
1.700	1.216	3.88
1.760	1.216	3.88
1.820	1.216	3.88

## PITOT PRESSURE-YAW ANGLE SURVEYS

7 19

NSGA= 4 TSTAG=469.3  
 X =7.579 TWALL=502.8  
 Y =3.459 TGFN =445.9  
 YG=2.965 TIME =166.7

NSGA= 4 TSTAG=456.8  
 X =7.579 TWALL=500.0  
 Y =3.709 TGFN =430.9  
 YG=3.215 TIME =154.1

Z	PT BAR	ALFA	Z	PT BAR	ALFA
0.010	0.229	9.44	0.010	0.219	7.73
0.025	0.286	8.87	0.025	0.280	7.12
0.040	0.331	8.13	0.040	0.325	6.38
0.055	0.363	6.91	0.055	0.356	5.62
0.070	0.389	6.24	0.070	0.383	4.95
0.085	0.415	5.91	0.085	0.406	4.57
0.100	0.438	5.37	0.100	0.429	4.12
0.130	0.476	4.76	0.130	0.465	3.68
0.160	0.517	4.37	0.160	0.504	3.42
0.190	0.554	4.05	0.190	0.537	3.02
0.220	0.594	3.70	0.220	0.578	2.91
0.250	0.637	3.43	0.250	0.605	2.56
0.280	0.672	3.35	0.280	0.651	2.51
0.310	0.715	3.15	0.310	0.685	2.37
0.340	0.756	2.94	0.340	0.728	2.19
0.370	0.796	2.81	0.370	0.765	2.11
0.400	0.836	2.70	0.400	0.806	1.91
0.430	0.876	2.65	0.430	0.843	1.80
0.460	0.923	2.47	0.460	0.870	1.81
0.490	0.963	2.38	0.490	0.918	1.63
0.520	1.004	2.25	0.520	0.954	1.64
0.550	1.037	2.18	0.550	0.988	1.52
0.580	1.051	2.12	0.580	1.019	1.47
0.620	1.069	2.05	0.620	1.027	1.41
0.680	1.086	1.92	0.680	1.048	1.28
0.740	1.105	1.87	0.740	1.067	1.28
0.800	1.099	1.73	0.800	1.063	1.21
0.860	1.087	1.65	0.860	1.050	1.07
0.920	1.084	1.51	0.920	1.047	0.94
0.980	1.080	1.39	0.980	1.040	0.74
1.040	1.075	1.30	1.040	1.032	0.69
1.100	1.067	1.18	1.100	1.024	0.52
1.160	1.057	1.00	1.160	1.013	0.42
1.220	1.049	0.86	1.220	1.010	0.23
1.280	1.038	0.69	1.280	1.002	0.16
1.340	1.029	0.59	1.340	0.999	0.02
1.400	1.023	0.33	1.400	0.995	-0.10
1.460	1.018	0.24	1.460	0.993	-0.07
1.520	1.012	0.19	1.520	0.996	-0.08
1.580	1.013	0.07	1.580	0.996	-0.12
1.640	1.012	0.07	1.640	0.996	-0.15
1.700	1.010	0.04	1.700	0.997	-0.22
1.760	1.010	-0.04	1.760	0.997	-0.28
1.820	1.018	-0.11	1.820	0.999	-0.34



## PITOT PRESSURE-YAW ANGLE SURVEYS

6 20

NSGA= 4 TSTAG=463.0  
 X =7.579 TWALL=511.2  
 Y =3.959 TGEN =447.4  
 YG=3.465 TIME =172.7

NSGA= 4 TSTAG=471.2  
 X =7.579 TWALL=500.7  
 Y =4.209 TGEN =444.1  
 YG=3.715 TIME =124.5

Z	PT BAR	ALFA
0.010	0.202	10.11
0.025	0.278	6.75
0.040	0.326	5.43
0.055	0.355	4.87
0.070	0.378	4.69
0.085	0.400	4.00
0.100	0.419	3.65
0.130	0.460	3.27
0.160	0.497	2.97
0.190	0.530	2.55
0.220	0.565	2.35
0.250	0.600	2.13
0.280	0.637	1.98
0.310	0.678	1.81
0.340	0.703	1.61
0.370	0.755	1.46
0.400	0.782	1.45
0.430	0.820	1.32
0.460	0.857	1.28
0.490	0.891	1.23
0.520	0.925	1.15
0.550	0.957	1.07
0.580	0.978	0.95
0.620	0.998	0.86
0.680	1.028	0.83
0.740	1.047	0.74
0.800	1.038	0.63
0.860	1.025	0.39
0.920	1.021	0.30
0.980	1.014	0.23
1.040	1.007	0.01
1.100	1.001	-0.09
1.160	0.998	-0.15
1.220	0.996	-0.33
1.280	0.994	-0.44
1.340	0.994	-0.46
1.400	0.994	-0.46
1.460	0.995	-0.46
1.520	0.996	-0.45
1.580	1.000	-0.35
1.640	1.002	-0.30
1.700	1.006	-0.32
1.760	1.007	-0.35
1.820	1.009	-0.30

Z	PT BAR	ALFA
0.010	0.210	3.27
0.025	0.264	3.20
0.040	0.322	2.50
0.055	0.351	2.18
0.070	0.376	1.99
0.085	0.402	1.86
0.100	0.422	1.71
0.130	0.461	1.50
0.160	0.494	1.34
0.190	0.526	1.27
0.220	0.559	1.35
0.250	0.597	1.10
0.280	0.631	0.96
0.310	0.666	0.94
0.340	0.702	0.87
0.370	0.737	0.81
0.400	0.771	0.77
0.430	0.811	0.80
0.460	0.846	0.78
0.490	0.881	0.72
0.520	0.916	0.72
0.550	0.946	0.70
0.580	0.962	0.68
0.620	0.987	0.64
0.680	1.010	0.57
0.740	1.029	0.54
0.800	1.024	0.45
0.860	1.018	0.42
0.920	1.018	0.42
0.980	1.016	0.37
1.040	1.017	0.35
1.100	1.013	0.35
1.160	1.010	0.32
1.220	1.009	0.29
1.280	1.008	0.32
1.340	1.009	0.35
1.400	1.011	0.35
1.460	1.012	0.35
1.520	1.014	0.34
1.580	1.016	0.31
1.640	1.018	0.28
1.700	1.016	0.19
1.760	1.014	0.16
1.820	1.015	0.15

## PITOT PRESSURE-YAW ANGLE SURVEYS

22 32

NSGA= 4 TSTAG=468.1  
 X =7.579 TWALL=506.3  
 Y =4.709 TGEN =447.5  
 YG=4.215 TIME =112.6

NSGA= 4 TSTAG=442.0  
 X =7.079 TWALL=500.9  
 Y =0.674 TGEN =425.1  
 YG=0.213 TIME =121.0

Z	PT BAR	ALFA
0.010	0.218	0.47
0.025	0.278	0.39
0.040	0.333	0.36
0.055	0.364	0.28
0.070	0.392	0.21
0.085	0.413	0.16
0.100	0.433	0.12
0.130	0.472	-0.01
0.160	0.508	0.0
0.190	0.545	0.02
0.220	0.580	-0.08
0.250	0.616	-0.11
0.280	0.650	0.0
0.310	0.687	-0.03
0.340	0.725	-0.07
0.370	0.763	-0.11
0.400	0.799	-0.10
0.430	0.836	-0.12
0.460	0.869	-0.11
0.490	0.910	-0.15
0.520	0.943	-0.16
0.550	0.965	-0.16
0.580	0.976	-0.08
0.620	0.984	-0.11
0.680	1.007	-0.12
0.740	1.016	-0.07
0.800	1.004	-0.13
0.860	1.001	-0.19
0.920	1.001	-0.25
0.980	1.001	-0.32
1.040	1.002	-0.32
1.100	1.000	-0.28
1.160	0.999	-0.26
1.220	0.999	-0.24
1.280	0.997	-0.20
1.340	0.995	-0.14
1.400	0.997	-0.09
1.460	1.006	-0.15
1.520	1.006	-0.15
1.580	1.006	-0.15
1.640	1.006	-0.15
1.700	1.006	-0.15
1.760	1.006	-0.15
1.820	1.006	-0.15

Z	PT BAR	ALFA
0.010	0.277	6.14
0.025	0.446	6.20
0.040	0.534	5.79
0.055	0.591	5.44
0.070	0.637	5.29
0.085	0.670	5.31
0.100	0.700	5.29
0.130	0.751	5.17
0.160	0.799	5.08
0.190	0.844	4.92
0.220	0.887	4.81
0.250	0.926	4.69
0.280	0.972	4.47
0.310	1.006	4.22
0.340	1.045	4.07
0.370	1.073	3.89
0.400	1.097	3.75
0.430	1.122	3.56
0.460	1.156	3.44
0.490	1.176	3.50
0.520	1.169	3.58
0.550	1.164	3.60
0.580	1.163	3.55
0.620	1.164	3.51
0.680	1.164	3.51
0.740	1.162	3.52
0.800	1.162	3.54
0.860	1.161	3.55
0.920	1.163	3.55
0.980	1.162	3.54
1.040	1.162	3.56
1.100	1.162	3.57
1.160	1.161	3.56
1.220	1.160	3.59
1.280	1.161	3.61
1.340	1.162	3.64
1.400	1.170	3.63
1.460	1.171	3.70
1.520	1.161	3.67
1.580	1.158	3.67
1.640	1.168	3.69
1.700	1.173	3.77
1.760	1.165	3.70
1.820	1.158	3.53



## PITOT PRESSURE-YAW ANGLE SURVEYS

31 30

NSGA= 4 TSTAG=447.8  
 X =7.079 TWALL=513.3  
 Y =0.924 TGEN =441.2  
 YG=0.463 TIME =117.5

NSGA= 4 TSTAG=458.9  
 X =7.079 TWALL=502.3  
 Y =1.371 TGEN =433.9  
 YG=0.910 TIME =147.1

Z	PT BAR	ALFA
0.010	0.252	8.35
0.025	0.382	8.57
0.040	0.444	8.31
0.055	0.489	7.83
0.070	0.521	7.35
0.085	0.548	7.06
0.100	0.575	6.80
0.130	0.619	6.19
0.160	0.658	5.77
0.190	0.698	5.16
0.220	0.744	4.78
0.250	0.787	4.41
0.280	0.838	4.39
0.310	0.883	4.22
0.340	0.926	4.26
0.370	0.971	4.04
0.400	1.016	3.88
0.430	1.062	3.69
0.460	1.103	3.57
0.490	1.127	3.60
0.520	1.153	3.49
0.550	1.158	3.42
0.580	1.163	3.46
0.620	1.166	3.51
0.680	1.171	3.46
0.740	1.179	3.35
0.800	1.183	3.29
0.860	1.186	3.29
0.920	1.188	3.29
0.980	1.190	3.36
1.040	1.188	3.37
1.100	1.185	3.34
1.160	1.184	3.32
1.220	1.186	3.33
1.280	1.188	3.37
1.340	1.194	3.46
1.400	1.190	3.57
1.460	1.189	3.46
1.520	1.194	3.48
1.580	1.196	3.59
1.640	1.196	3.64
1.700	1.197	3.61
1.760	1.198	3.58
1.820	1.200	3.55

Z	PT BAR	ALFA
0.010	0.243	9.20
0.025	0.336	9.28
0.040	0.386	9.11
0.055	0.420	8.65
0.070	0.444	8.07
0.085	0.465	7.71
0.100	0.485	7.43
0.130	0.522	6.90
0.160	0.561	6.22
0.190	0.593	5.59
0.220	0.633	5.26
0.250	0.672	4.81
0.280	0.711	4.43
0.310	0.753	4.07
0.340	0.799	3.86
0.370	0.844	3.66
0.400	0.887	3.31
0.430	0.931	3.21
0.460	0.970	3.09
0.490	1.019	2.95
0.520	1.058	2.90
0.550	1.090	2.85
0.580	1.112	2.85
0.620	1.133	2.80
0.680	1.149	2.91
0.740	1.158	3.03
0.800	1.160	3.09
0.860	1.159	2.99
0.920	1.158	2.98
0.980	1.160	2.97
1.040	1.156	3.02
1.100	1.155	3.04
1.160	1.154	3.02
1.220	1.152	3.06
1.280	1.154	3.20
1.340	1.154	3.26
1.400	1.151	3.27
1.460	1.146	3.29
1.520	1.143	3.38
1.580	1.147	3.53
1.640	1.149	3.46
1.700	1.154	3.47
1.760	1.162	3.60
1.820	1.162	3.60

## PITOT PRESSURE-YAW ANGLE SURVEYS

29 28

NSGA= 4 TSTAG=460.1  
 X =7.079 TWALL=495.2  
 Y =1.871 TGEN =432.3  
 YG=1.410 TIME =130.2

NSGA= 4 TSTAG=454.5  
 X =7.079 TWALL=500.8  
 Y =2.371 TGEN =432.9  
 YG=1.910 TIME =136.7

Z	PT BAR	ALFA
0.010	0.234	10.22
0.025	0.299	9.98
0.040	0.351	9.73
0.055	0.383	9.15
0.070	0.404	8.57
0.085	0.424	8.21
0.100	0.441	7.84
0.130	0.478	7.01
0.160	0.511	6.31
0.190	0.552	5.53
0.220	0.583	5.14
0.250	0.624	4.71
0.280	0.656	4.29
0.310	0.693	3.88
0.340	0.729	3.73
0.370	0.779	3.65
0.400	0.822	3.37
0.430	0.868	3.09
0.460	0.907	2.98
0.490	0.959	2.86
0.520	1.002	2.78
0.550	1.048	2.68
0.580	1.078	2.63
0.620	1.109	2.66
0.680	1.133	2.65
0.740	1.146	2.67
0.800	1.149	2.78
0.860	1.147	2.85
0.920	1.150	3.01
0.980	1.150	3.12
1.040	1.148	3.18
1.100	1.148	3.30
1.160	1.146	3.34
1.220	1.147	3.44
1.280	1.144	3.32
1.340	1.149	3.24
1.400	1.154	3.36
1.460	1.157	3.40
1.520	1.161	3.46
1.580	1.166	3.57
1.640	1.169	3.64
1.700	1.171	3.67
1.760	1.171	3.67
1.820	1.173	3.61

Z	PT BAR	ALFA
0.010	0.228	10.74
0.025	0.296	10.77
0.040	0.335	10.05
0.055	0.363	9.49
0.070	0.387	8.65
0.085	0.407	8.02
0.100	0.427	7.32
0.130	0.460	6.68
0.160	0.497	5.83
0.190	0.530	5.20
0.220	0.569	4.76
0.250	0.610	4.43
0.280	0.649	4.13
0.310	0.691	3.87
0.340	0.729	3.62
0.370	0.775	3.41
0.400	0.824	3.20
0.430	0.868	2.99
0.460	0.924	2.86
0.490	0.959	2.77
0.520	1.006	2.65
0.550	1.053	2.61
0.580	1.089	2.52
0.620	1.114	2.53
0.680	1.138	2.63
0.740	1.148	2.80
0.800	1.154	3.02
0.860	1.154	3.06
0.920	1.156	3.14
0.980	1.158	3.21
1.040	1.160	3.28
1.100	1.162	3.36
1.160	1.163	3.43
1.220	1.165	3.51
1.280	1.167	3.57
1.340	1.169	3.60
1.400	1.169	3.60
1.460	1.169	3.60
1.520	1.169	3.60
1.580	1.169	3.60
1.640	1.169	3.60
1.700	1.169	3.60
1.760	1.169	3.60
1.820	1.169	3.60



## PITOT PRESSURE-YAW ANGLE SURVEYS

33 34

NSGA= 4 TSTAG=464.1  
 X =5.079 TWALL=505.0  
 Y =1.009 TGEN =444.9  
 YG=0.678 TIME =138.1

NSGA= 4 TSTAG=451.2  
 X =5.079 TWALL=500.5  
 Y =1.459 TGEN =427.2  
 YG=1.128 TIME =147.1

Z	PT BAR	ALFA
0.010	0.235	9.95
0.025	0.321	9.76
0.040	0.378	9.13
0.055	0.408	8.56
0.070	0.431	7.84
0.085	0.455	7.36
0.100	0.475	7.04
0.130	0.515	6.37
0.160	0.554	5.63
0.190	0.596	5.14
0.220	0.640	4.57
0.250	0.685	4.20
0.280	0.731	3.98
0.310	0.775	3.62
0.340	0.823	3.38
0.370	0.866	3.22
0.400	0.913	2.98
0.430	0.964	2.89
0.460	0.999	2.73
0.490	1.045	2.57
0.520	1.092	2.55
0.550	1.120	2.46
0.580	1.138	2.45
0.620	1.140	2.51
0.680	1.143	2.52
0.740	1.141	2.56
0.800	1.142	2.69
0.860	1.145	2.69
0.920	1.142	2.76
0.980	1.143	2.98
1.040	1.151	3.11
1.100	1.158	3.05
1.160	1.160	3.17
1.220	1.160	3.39
1.280	1.162	3.31
1.340	1.165	3.19
1.400	1.168	3.20
1.460	1.169	3.29
1.520	1.173	3.31
1.580	1.179	3.38
1.640	1.181	3.40
1.700	1.182	3.37
1.760	1.184	3.37
1.820	1.184	3.41

Z	PT BAR	ALFA
0.010	0.225	9.91
0.025	0.300	9.92
0.040	0.345	9.29
0.055	0.373	8.41
0.070	0.393	7.74
0.085	0.416	7.00
0.100	0.434	6.36
0.130	0.473	5.71
0.160	0.511	4.94
0.190	0.549	4.46
0.220	0.588	4.25
0.250	0.630	3.88
0.280	0.667	3.42
0.310	0.710	3.32
0.340	0.754	3.05
0.370	0.794	2.90
0.400	0.845	2.65
0.430	0.888	2.51
0.460	0.936	2.38
0.490	0.970	2.35
0.520	1.020	2.24
0.550	1.061	2.09
0.580	1.095	2.18
0.620	1.119	2.16
0.680	1.137	2.27
0.740	1.144	2.41
0.800	1.149	2.46
0.860	1.155	2.68
0.920	1.158	2.75
0.980	1.156	2.86
1.040	1.148	2.96
1.100	1.149	2.97
1.160	1.157	2.96
1.220	1.160	2.96
1.280	1.157	3.03
1.340	1.165	3.23
1.400	1.177	3.26
1.460	1.183	3.21
1.520	1.183	3.25
1.580	1.187	3.29
1.640	1.191	3.33
1.700	1.207	3.31
1.760	1.198	3.31
1.820	1.197	3.32

## PITOT PRESSURE-YAW ANGLE SURVEYS

35 11

NSGA= 4 TSTAG=459.3  
 X =5.079 TWALL=495.3  
 Y =1.959 TGEN =433.3  
 YG=1.628 TIME =148.7

NSGA= 10 TSTAG=474.4  
 X =7.599 TWALL=507.0  
 Y =1.556 TGEN =456.6  
 YG=0.255 TIME =164.9

Z	PT BAR	ALFA
0.010	0.220	10.47
0.025	0.289	9.71
0.040	0.315	9.22
0.055	0.359	7.61
0.070	0.383	6.73
0.085	0.404	6.16
0.100	0.426	5.63
0.130	0.469	4.77
0.160	0.506	4.20
0.190	0.544	3.85
0.220	0.586	3.59
0.250	0.625	3.32
0.280	0.668	3.12
0.310	0.710	2.76
0.340	0.754	2.66
0.370	0.799	2.40
0.400	0.839	2.42
0.430	0.888	2.31
0.460	0.935	2.09
0.490	0.974	2.11
0.520	1.020	2.13
0.550	1.065	2.07
0.580	1.093	2.07
0.620	1.118	2.11
0.680	1.134	2.26
0.740	1.143	2.46
0.800	1.148	2.59
0.860	1.150	2.77
0.920	1.157	2.90
0.980	1.161	3.03
1.040	1.159	3.13
1.100	1.158	3.32
1.160	1.165	3.56
1.220	1.171	3.72
1.280	1.171	3.73
1.340	1.170	3.82
1.400	1.180	4.01
1.460	1.191	4.23
1.520	1.196	4.22
1.580	1.198	4.30
1.640	1.199	4.39
1.700	1.196	4.39
1.760	1.190	4.50
1.820	1.171	4.23

Z	PT BAR	ALFA
0.010	0.459	13.06
0.025	0.833	13.79
0.040	1.057	13.10
0.055	1.123	12.85
0.070	1.169	12.79
0.085	1.203	12.58
0.100	1.221	12.42
0.130	1.251	12.10
0.160	1.284	11.68
0.190	1.311	11.11
0.220	1.337	10.88
0.250	1.354	10.59
0.280	1.371	10.45
0.310	1.383	10.26
0.340	1.389	10.19
0.370	1.392	10.20
0.400	1.389	10.15
0.430	1.410	9.87
0.460	1.447	9.87
0.490	1.448	9.96
0.520	1.425	10.03
0.550	1.421	10.01
0.580	1.417	9.94
0.620	1.416	9.88
0.680	1.431	9.82
0.740	1.429	9.67
0.800	1.423	9.71
0.860	1.427	9.73
0.920	1.426	9.77
0.980	1.425	9.82
1.040	1.427	9.83
1.100	1.431	9.72
1.160	1.432	9.77
1.220	1.430	9.73
1.280	1.432	9.75
1.340	1.429	9.77
1.400	1.428	9.73
1.460	1.427	9.71
1.520	1.427	9.72
1.580	1.429	9.74
1.640	1.428	9.87
1.700	1.429	9.95
1.760	1.434	9.98
1.820	1.434	9.98



## PITOT PRESSURE-YAW ANGLE SURVEYS 15 TO 10

NSGA= 10 TSTAG=464.3  
 X =7.599 TWALL=512.4  
 Y =1.806 TGEN =453.1  
 YG=0.505 TIME =160.4

NSGA= 10 TSTAG=468.4  
 X =7.599 TWALL=510.4  
 Y =2.056 TGEN =453.7  
 YG=0.755 TIME =180.7

Z	PT BAR	ALFA
0.010	0.465	18.09
0.025	0.827	18.08
0.040	0.934	17.29
0.055	0.998	16.56
0.070	1.023	16.11
0.085	1.038	15.68
0.100	1.055	15.22
0.130	1.080	14.40
0.160	1.108	13.57
0.190	1.142	12.83
0.220	1.180	12.06
0.250	1.226	11.57
0.280	1.265	11.06
0.310	1.310	10.42
0.340	1.338	9.98
0.370	1.365	9.63
0.400	1.391	9.51
0.430	1.393	9.39
0.460	1.410	9.28
0.490	1.419	9.24
0.520	1.399	9.28
0.550	1.388	9.38
0.580	1.387	9.36
0.620	1.392	9.37
0.680	1.397	9.41
0.740	1.405	9.32
0.800	1.406	9.31
0.860	1.410	9.25
0.920	1.410	9.19
0.980	1.408	9.17
1.040	1.408	9.18
1.100	1.408	9.20
1.160	1.412	9.23
1.220	1.420	9.20
1.280	1.423	9.22
1.340	1.424	9.19
1.400	1.419	9.22
1.460	1.418	9.23
1.520	1.418	9.24
1.580	1.419	9.22
1.640	1.421	9.20
1.700	1.421	9.20
1.760	1.422	9.21
1.820	1.430	9.21

Z	PT BAR	ALFA
0.010	0.410	21.66
0.025	0.680	21.51
0.040	0.785	20.61
0.055	0.842	19.78
0.070	0.878	19.14
0.085	0.891	18.69
0.100	0.902	18.16
0.130	0.916	16.95
0.160	0.931	15.97
0.190	0.951	14.92
0.220	0.979	14.02
0.250	1.008	13.07
0.280	1.042	12.11
0.310	1.084	11.45
0.340	1.129	10.75
0.370	1.175	10.23
0.400	1.222	9.70
0.430	1.260	9.32
0.460	1.307	8.99
0.490	1.350	8.71
0.520	1.383	8.44
0.550	1.393	8.25
0.580	1.394	8.26
0.620	1.396	8.31
0.680	1.392	8.47
0.740	1.391	8.60
0.800	1.383	8.74
0.860	1.377	8.82
0.920	1.378	8.80
0.980	1.380	8.80
1.040	1.385	8.79
1.100	1.397	8.79
1.160	1.407	8.72
1.220	1.419	8.76
1.280	1.422	8.73
1.340	1.420	8.71
1.400	1.418	8.75
1.460	1.419	8.76
1.520	1.420	8.77
1.580	1.422	8.86
1.640	1.425	8.88
1.700	1.424	8.91
1.760	1.425	9.00
1.820	1.430	9.17

## PITOT PRESSURE-YAW ANGLE SURVEYS

16 9

NSGA= 10 TSTAG=452.0  
 X =7.599 TWALL=508.4  
 Y =2.306 TGEN =441.4  
 YG=1.005 TIME =182.0

NSGA= 10 TSTAG=483.3  
 X =7.599 TWALL=509.1  
 Y =2.556 TGEN =465.5  
 YG=1.255 TIME =157.5

Z	PT BAR	ALFA
0.010	0.381	24.63
0.025	0.587	24.22
0.040	0.685	23.08
0.055	0.734	22.16
0.070	0.758	21.57
0.085	0.772	20.82
0.100	0.778	20.13
0.130	0.787	18.79
0.160	0.793	17.60
0.190	0.810	16.33
0.220	0.831	15.24
0.250	0.855	14.08
0.280	0.886	13.02
0.310	0.923	12.05
0.340	0.962	11.20
0.370	1.012	10.64
0.400	1.064	9.98
0.430	1.109	9.46
0.460	1.153	8.93
0.490	1.213	8.55
0.520	1.263	8.17
0.550	1.315	7.97
0.580	1.348	7.67
0.620	1.363	7.50
0.680	1.385	7.54
0.740	1.392	7.61
0.800	1.387	7.76
0.860	1.371	8.10
0.920	1.370	8.30
0.980	1.374	8.35
1.040	1.377	8.38
1.100	1.378	8.49
1.160	1.379	8.53
1.220	1.388	8.52
1.280	1.401	8.56
1.340	1.411	8.61
1.400	1.416	8.58
1.460	1.419	8.58
1.520	1.421	8.59
1.580	1.420	8.63
1.640	1.418	8.70
1.700	1.418	8.70
1.760	1.418	8.70
1.820	1.418	8.70

Z	PT BAR	ALFA
0.010	0.395	26.54
0.025	0.542	25.97
0.040	0.614	25.06
0.055	0.649	24.13
0.070	0.672	23.16
0.085	0.683	22.51
0.100	0.690	21.82
0.130	0.698	20.54
0.160	0.703	19.02
0.190	0.714	17.57
0.220	0.729	16.16
0.250	0.757	14.90
0.280	0.788	13.60
0.310	0.825	12.61
0.340	0.869	11.61
0.370	0.906	10.77
0.400	0.954	10.03
0.430	0.996	9.38
0.460	1.047	8.79
0.490	1.106	8.20
0.520	1.162	7.94
0.550	1.221	7.59
0.580	1.276	7.26
0.620	1.325	7.01
0.680	1.361	6.99
0.740	1.379	6.97
0.800	1.398	7.01
0.860	1.403	7.23
0.920	1.391	7.50
0.980	1.379	7.76
1.040	1.379	7.93
1.100	1.384	8.01
1.160	1.389	8.08
1.220	1.392	8.10
1.280	1.398	8.23
1.340	1.408	8.34
1.400	1.415	8.40
1.460	1.413	8.34
1.520	1.411	8.38
1.580	1.413	8.43
1.640	1.417	8.43
1.700	1.416	8.46
1.760	1.416	8.52
1.820	1.416	8.64



## PITOT PRESSURE-YAW ANGLE SURVEYS

17 8

NSGA= 10 TSTAG=465.4  
 X =7.599 TWALL=512.8  
 Y =2.806 TGEN =455.8  
 YG=1.505 TIME =236.3

NSGA= 10 TSTAG=458.8  
 X =7.599 TWALL=506.8  
 Y =3.056 TGEN =443.1  
 YG=1.755 TIME =506.5

Z	PT BAR	ALFA
0.010	0.347	29.69
0.025	0.478	28.97
0.040	0.551	27.69
0.055	0.579	26.57
0.070	0.598	25.61
0.085	0.608	24.86
0.100	0.614	24.08
0.130	0.613	22.36
0.160	0.619	20.68
0.190	0.626	18.91
0.220	0.639	17.26
0.250	0.663	15.70
0.280	0.695	14.02
0.310	0.725	12.95
0.340	0.769	11.78
0.370	0.809	10.86
0.400	0.855	9.92
0.430	0.910	9.25
0.460	0.964	8.70
0.490	1.013	8.14
0.520	1.067	7.65
0.550	1.126	7.40
0.580	1.191	7.00
0.620	1.267	6.67
0.680	1.333	6.41
0.740	1.360	6.47
0.800	1.374	6.63
0.860	1.391	6.66
0.920	1.395	6.74
0.980	1.390	6.96
1.040	1.380	7.49
1.100	1.378	7.71
1.160	1.378	7.77
1.220	1.383	7.92
1.280	1.385	8.05
1.340	1.390	8.26
1.400	1.410	8.38
1.460	1.410	8.37
1.520	1.408	8.46
1.580	1.407	8.54
1.640	1.405	8.59
1.700	1.414	8.77
1.760	1.415	8.95
1.820	1.419	8.91

Z	PT BAR	ALFA
0.010	0.317	36.54
0.025	0.427	32.84
0.040	0.503	30.40
0.055	0.527	28.91
0.070	0.540	27.91
0.085	0.545	27.24
0.100	0.546	26.22
0.130	0.543	24.19
0.160	0.545	21.94
0.190	0.551	19.82
0.220	0.564	17.47
0.250	0.590	14.81
0.280	0.619	13.27
0.310	0.657	11.46
0.340	0.693	10.18
0.370	0.740	9.13
0.400	0.793	8.67
0.430	0.844	7.78
0.460	0.884	7.35
0.490	0.946	6.74
0.520	1.012	6.60
0.550	1.062	6.29
0.580	1.124	6.02
0.620	1.205	6.12
0.680	1.302	5.86
0.740	1.335	5.91
0.800	1.355	6.01
0.860	1.372	6.08
0.920	1.381	6.15
0.980	1.377	6.41
1.040	1.379	6.65
1.100	1.381	6.96
1.160	1.373	7.43
1.220	1.372	7.76
1.280	1.378	7.91
1.340	1.383	7.92
1.400	1.390	8.08
1.460	1.404	8.31
1.520	1.413	8.33
1.580	1.410	8.42
1.640	1.413	8.54
1.700	1.413	8.58
1.760	1.415	8.62
1.820	1.415	8.75

## PITOT PRESSURE-YAW ANGLE SURVEYS 18 7

NSGA= 10 TSTAG=474.9  
 X =7.599 TWALL=507.4  
 Y =3.306 TGEN =459.3  
 YG=2.005 TIME =186.9

NSGA= 10 TSTAG=470.6  
 X =7.599 TWALL=512.4  
 Y =3.556 TGEN =458.0  
 YG=2.255 TIME =186.3

Z	PT BAR	ALFA
0.010	0.315	34.66
0.025	0.414	33.35
0.040	0.457	32.06
0.055	0.476	30.63
0.070	0.484	29.29
0.085	0.488	28.13
0.100	0.489	26.87
0.130	0.484	24.50
0.160	0.485	22.14
0.190	0.493	19.42
0.220	0.509	17.15
0.250	0.536	15.04
0.280	0.568	13.29
0.310	0.606	11.77
0.340	0.649	10.44
0.370	0.699	9.39
0.400	0.750	8.64
0.430	0.801	7.88
0.460	0.859	7.31
0.490	0.918	6.88
0.520	0.970	6.56
0.550	1.030	6.22
0.580	1.100	5.87
0.620	1.175	5.68
0.680	1.278	5.43
0.740	1.335	5.43
0.800	1.355	5.51
0.860	1.373	5.67
0.920	1.386	5.80
0.980	1.394	6.01
1.040	1.396	6.39
1.100	1.402	6.54
1.160	1.407	6.95
1.220	1.402	7.56
1.280	1.399	7.83
1.340	1.400	7.90
1.400	1.400	8.13
1.460	1.407	8.35
1.520	1.427	8.62
1.580	1.441	8.56
1.640	1.445	8.57
1.700	1.447	8.67
1.760	1.437	8.60
1.820	1.436	8.71

Z	PT BAR	ALFA
0.010	0.275	36.28
0.025	0.338	35.84
0.040	0.401	34.08
0.055	0.421	32.40
0.070	0.430	31.05
0.085	0.436	29.45
0.100	0.438	28.07
0.130	0.438	25.27
0.160	0.441	22.45
0.190	0.450	19.85
0.220	0.468	17.22
0.250	0.493	14.97
0.280	0.529	13.21
0.310	0.571	11.63
0.340	0.616	10.32
0.370	0.663	9.58
0.400	0.715	8.51
0.430	0.766	7.95
0.460	0.825	7.50
0.490	0.880	7.29
0.520	0.941	6.82
0.550	0.997	6.71
0.580	1.057	6.44
0.620	1.144	6.07
0.680	1.247	5.91
0.740	1.317	5.90
0.800	1.343	5.98
0.860	1.369	6.09
0.920	1.385	6.23
0.980	1.402	6.36
1.040	1.406	6.61
1.100	1.406	6.77
1.160	1.414	7.08
1.220	1.416	7.35
1.280	1.411	7.89
1.340	1.412	8.46
1.400	1.419	8.59
1.460	1.422	8.80
1.520	1.427	9.06
1.580	1.438	9.70
1.640	1.438	9.70
1.700	1.438	9.70
1.760	1.438	9.70
1.820	1.438	9.70



## PITOT PRESSURE-YAW ANGLE SURVEYS

19 6

NSGA= 10 TSTAG=464.8  
 X =7.599 TWALL=510.9  
 Y =3.806 TGEN =452.5  
 YG=2.505 TIME =190.4

NSGA= 10 TSTAG=447.5  
 X =7.599 TWALL=498.0  
 Y =4.056 TGEN =492.7  
 YG=2.755 TIME =381.4

Z	PT BAR	ALFA
0.010	0.257	35.07
0.025	0.304	34.85
0.040	0.344	34.12
0.055	0.370	32.69
0.070	0.383	31.05
0.085	0.391	29.23
0.100	0.396	27.41
0.130	0.402	24.12
0.160	0.411	21.21
0.190	0.427	18.30
0.220	0.448	15.87
0.250	0.480	13.64
0.280	0.518	11.86
0.310	0.561	10.68
0.340	0.605	9.49
0.370	0.653	8.73
0.400	0.701	8.11
0.430	0.760	7.42
0.460	0.804	7.10
0.490	0.862	6.74
0.520	0.920	6.33
0.550	0.985	6.02
0.580	1.032	6.03
0.620	1.102	5.64
0.680	1.229	5.52
0.740	1.304	5.59
0.800	1.345	5.66
0.860	1.370	5.90
0.920	1.394	6.03
0.980	1.414	6.27
1.040	1.422	6.50
1.100	1.425	6.68
1.160	1.432	6.97
1.220	1.439	7.19
1.280	1.446	7.58
1.340	1.436	8.35
1.400	1.438	8.72
1.460	1.449	8.97
1.520	1.455	9.16
1.580	1.455	9.42
1.640	1.462	9.72
1.700	1.462	9.72
1.760	1.462	9.72
1.820	1.462	9.72

Z	PT BAR	ALFA
0.010	0.233	31.91
0.025	0.286	31.31
0.040	0.312	30.39
0.055	0.329	29.24
0.070	0.344	27.77
0.085	0.355	26.05
0.100	0.365	24.31
0.130	0.384	21.03
0.160	0.404	18.34
0.190	0.430	15.76
0.220	0.461	13.74
0.250	0.497	11.97
0.280	0.535	10.70
0.310	0.578	9.77
0.340	0.622	8.90
0.370	0.666	8.22
0.400	0.707	7.64
0.430	0.753	7.12
0.460	0.803	6.78
0.490	0.854	6.54
0.520	0.907	6.37
0.550	0.964	6.19
0.580	1.024	6.04
0.620	1.104	5.89
0.680	1.215	6.09
0.740	1.301	6.02
0.800	1.351	6.01
0.860	1.390	6.35
0.920	1.413	6.60
0.980	1.431	6.91
1.040	1.447	7.20
1.100	1.462	7.52
1.160	1.468	7.78
1.220	1.474	8.06
1.280	1.484	8.34
1.340	1.486	8.79
1.400	1.484	9.41
1.460	1.483	9.93
1.520	1.483	9.93
1.580	1.483	9.93
1.640	1.483	9.93
1.700	1.483	9.93
1.760	1.483	9.93
1.820	1.483	9.93

## PITOT PRESSURE-YAW ANGLE SURVEYS

20 22

NSGA= 10 TSTAG=477.3  
 X =7.599 TWALL=508.0  
 Y =4.306 TGEN =463.1  
 YG=3.005 TIME =147.3

NSGA= 10 TSTAG=470.5  
 X =7.599 TWALL=510.9  
 Y =4.806 TGEN =459.5  
 YG=3.505 TIME = 53.9

Z	PT BAR	ALFA
0.010	0.233	29.51
0.025	0.265	29.04
0.040	0.292	27.64
0.055	0.310	26.11
0.070	0.326	24.70
0.085	0.340	23.00
0.100	0.353	21.44
0.130	0.379	18.37
0.160	0.408	15.45
0.190	0.436	13.32
0.220	0.471	11.61
0.250	0.508	9.97
0.280	0.550	8.63
0.310	0.591	7.90
0.340	0.629	7.38
0.370	0.674	6.76
0.400	0.720	6.18
0.430	0.767	5.86
0.460	0.811	5.55
0.490	0.858	5.17
0.520	0.901	4.89
0.550	0.959	4.75
0.580	1.006	4.42
0.620	1.070	4.18
0.680	1.154	3.88
0.740	1.212	3.92
0.800	1.236	3.73
0.860	1.239	3.71
0.920	1.249	3.57
0.980	1.247	3.54
1.040	1.235	3.39
1.100	1.224	3.22
1.160	1.214	3.05
1.220	1.202	2.84
1.280	1.183	2.66
1.340	1.115	2.67
1.400	1.033	1.10
1.460	1.023	0.39
1.520	1.025	0.32
1.580	1.025	0.28
1.640	1.025	0.23
1.700	1.025	0.14
1.760	1.023	0.07
1.820	1.023	0.07

Z	PT BAR	ALFA
0.010	0.232	25.50
0.025	0.266	24.23
0.040	0.294	21.72
0.055	0.318	19.30
0.070	0.339	17.15
0.085	0.357	15.27
0.100	0.379	13.18
0.130	0.414	10.77
0.160	0.456	8.93
0.190	0.497	7.79
0.220	0.543	6.86
0.250	0.587	6.30
0.280	0.632	5.53
0.310	0.673	5.17
0.340	0.722	4.79
0.370	0.768	4.33
0.400	0.825	4.11
0.430	0.862	3.81
0.460	0.921	3.70
0.490	0.973	3.50
0.520	1.022	3.19
0.550	1.066	3.10
0.580	1.112	3.03
0.620	1.156	2.96
0.680	1.182	2.96
0.740	1.190	2.78
0.800	1.192	2.75
0.860	1.199	2.81
0.920	1.165	2.85
0.980	1.098	2.18
1.040	1.045	1.00
1.100	1.016	0.08
1.160	1.002	-0.15
1.220	0.998	-0.17
1.280	0.996	-0.14
1.340	0.994	-0.08
1.400	0.996	-0.05
1.460	1.000	-0.10
1.520	1.006	-0.19
1.580	1.006	-0.19
1.640	1.006	-0.19
1.700	1.006	-0.19
1.760	1.006	-0.19
1.820	1.006	-0.19



## PITOT PRESSURE-YAW ANGLE SURVEYS

24 30

NSGA= 10 TSTAG=471.9  
 X =7.599 TWALL=499.0  
 Y =5.306 TGEN =455.9  
 YG=4.005 TIME =129.8

NSGA= 10 TSTAG=466.8  
 X =7.099 TWALL=511.9  
 Y =1.468 TGEN =454.4  
 YG=0.252 TIME =148.4

Z	PT BAR	ALFA
0.010	0.230	17.40
0.025	0.282	14.38
0.040	0.318	11.65
0.055	0.345	9.89
0.070	0.377	8.12
0.085	0.404	7.22
0.100	0.429	6.69
0.130	0.476	5.86
0.160	0.521	5.14
0.190	0.563	4.73
0.220	0.606	4.28
0.250	0.651	3.91
0.280	0.696	3.54
0.310	0.740	3.40
0.340	0.784	3.02
0.370	0.834	2.84
0.400	0.875	2.69
0.430	0.919	2.44
0.460	0.965	2.30
0.490	0.996	2.16
0.520	1.037	1.95
0.550	1.066	1.92
0.580	1.078	1.88
0.620	1.064	1.63
0.680	1.049	1.04
0.740	1.053	0.60
0.800	1.025	0.31
0.860	1.007	0.02
0.920	1.007	-0.01
0.980	1.007	-0.05
1.040	1.006	-0.10
1.100	1.005	-0.09
1.160	1.004	-0.08
1.220	1.003	-0.10
1.280	1.003	-0.10
1.340	1.003	-0.13
1.400	1.004	-0.14
1.460	1.005	-0.14
1.520	1.006	-0.14
1.580	1.006	-0.13
1.640	1.006	-0.17
1.700	1.008	-0.27
1.760	1.016	-0.30
1.820	1.009	-0.11

Z	PT BAR	ALFA
0.010	0.456	21.01
0.025	0.866	14.08
0.040	1.032	13.46
0.055	1.108	13.09
0.070	1.145	13.00
0.085	1.168	12.78
0.100	1.186	12.59
0.130	1.215	12.11
0.160	1.245	11.52
0.190	1.281	11.01
0.220	1.316	10.62
0.250	1.341	10.25
0.280	1.358	10.00
0.310	1.373	9.90
0.340	1.377	9.79
0.370	1.374	9.82
0.400	1.376	9.56
0.430	1.396	9.48
0.460	1.432	9.61
0.490	1.413	9.59
0.520	1.401	9.49
0.550	1.402	9.39
0.580	1.403	9.31
0.620	1.404	9.28
0.680	1.406	9.25
0.740	1.399	9.23
0.800	1.397	9.23
0.860	1.397	9.25
0.920	1.398	9.28
0.980	1.399	9.30
1.040	1.398	9.35
1.100	1.399	9.40
1.160	1.401	9.45
1.220	1.401	9.52
1.280	1.402	9.55
1.340	1.406	9.44
1.400	1.413	9.38
1.460	1.413	9.34
1.520	1.414	9.30
1.580	1.417	9.28
1.640	1.413	9.22
1.700	1.410	9.17
1.760	1.409	9.20
1.820	1.406	9.16

## PITOT PRESSURE-YAW ANGLE SURVEYS

29 28

NSGA= 10 TSTAG=463.7  
 X =7.099 TWALL=503.0  
 Y =1.968 TGEN =442.9  
 YG=0.752 TIME =131.5

NSGA= 10 TSTAG=456.9  
 X =7.099 TWALL=510.7  
 Y =2.468 TGEN =448.0  
 YG=1.252 TIME =162.0

Z	PT BAR	ALFA
0.010	0.397	22.29
0.025	0.550	22.05
0.040	0.733	20.89
0.055	0.789	20.05
0.070	0.820	19.47
0.085	0.838	18.95
0.100	0.849	18.38
0.130	0.861	17.20
0.160	0.870	16.09
0.190	0.901	14.96
0.220	0.929	13.87
0.250	0.955	13.07
0.280	1.000	12.29
0.310	1.035	11.43
0.340	1.074	10.72
0.370	1.128	10.13
0.400	1.179	9.58
0.430	1.225	9.25
0.460	1.270	8.83
0.490	1.312	8.56
0.520	1.348	8.27
0.550	1.374	8.11
0.580	1.379	8.00
0.620	1.385	8.01
0.680	1.377	8.14
0.740	1.366	8.32
0.800	1.369	8.48
0.860	1.373	8.57
0.920	1.376	8.58
0.980	1.380	8.60
1.040	1.382	8.69
1.100	1.385	8.71
1.160	1.389	8.64
1.220	1.391	8.62
1.280	1.391	8.59
1.340	1.393	8.53
1.400	1.403	8.56
1.460	1.414	8.68
1.520	1.420	8.72
1.580	1.421	8.79
1.640	1.408	8.82
1.700	1.396	8.70
1.760	1.397	8.66
1.820	1.401	8.71

Z	PT BAR	ALFA
0.010	0.336	27.80
0.025	0.480	27.26
0.040	0.566	26.46
0.055	0.608	25.20
0.070	0.631	24.24
0.085	0.644	23.54
0.100	0.650	22.77
0.130	0.655	21.19
0.160	0.659	19.49
0.190	0.670	17.86
0.220	0.688	16.36
0.250	0.713	15.07
0.280	0.745	13.50
0.310	0.779	12.42
0.340	0.819	11.30
0.370	0.862	10.47
0.400	0.917	9.66
0.430	0.961	9.05
0.460	1.009	8.52
0.490	1.065	7.96
0.520	1.134	7.50
0.550	1.179	7.18
0.580	1.248	6.88
0.620	1.310	6.61
0.680	1.352	6.49
0.740	1.378	6.54
0.800	1.384	6.62
0.860	1.387	7.05
0.920	1.381	6.92
0.980	1.368	7.30
1.040	1.365	7.43
1.100	1.371	7.62
1.160	1.375	7.72
1.220	1.381	7.77
1.280	1.385	7.80
1.340	1.388	7.87
1.400	1.389	8.05
1.460	1.397	8.13
1.520	1.408	8.22
1.580	1.419	8.31
1.640	1.428	8.38
1.700	1.432	8.41
1.760	1.431	8.53
1.820	1.429	8.64



## PITOT PRESSURE-YAW ANGLE SURVEYS

33 34

NSGA= 10 TSTAG=463.6  
 X =5.099 TWALL=514.5  
 Y =1.106 TGEN =453.6  
 YG=0.233 TIME =156.3

NSGA= 10 TSTAG=460.2  
 X =5.099 TWALL=510.3  
 Y =1.556 TGEN =440.4  
 YG=0.683 TIME =160.8

Z	PT BAR	ALFA
0.010	0.427	17.11
0.025	0.760	17.02
0.040	0.866	15.85
0.055	0.918	15.12
0.070	0.948	14.74
0.085	0.976	14.35
0.100	0.993	13.94
0.130	1.030	13.12
0.160	1.063	12.41
0.190	1.103	11.74
0.220	1.148	11.08
0.250	1.184	10.44
0.280	1.231	9.89
0.310	1.266	9.62
0.340	1.297	9.33
0.370	1.319	9.08
0.400	1.330	8.82
0.430	1.361	8.76
0.460	1.385	9.10
0.490	1.400	9.40
0.520	1.385	8.77
0.550	1.382	8.86
0.580	1.384	9.10
0.620	1.385	8.99
0.680	1.391	8.90
0.740	1.380	8.71
0.800	1.392	8.69
0.860	1.395	8.74
0.920	1.397	8.77
0.980	1.399	8.80
1.040	1.400	8.83
1.100	1.402	8.86
1.160	1.404	8.89
1.220	1.405	8.92
1.280	1.407	8.95
1.340	1.409	8.98
1.400	1.410	9.01
1.460	1.412	9.04
1.520	1.414	9.07
1.580	1.415	9.10
1.640	1.418	9.14
1.700	1.421	9.13
1.760	1.427	9.09
1.820	1.434	9.05

Z	PT BAR	ALFA
0.010	0.342	24.81
0.025	0.531	23.83
0.040	0.607	22.57
0.055	0.637	21.45
0.070	0.660	20.40
0.085	0.671	19.71
0.100	0.679	18.87
0.130	0.693	17.42
0.160	0.715	15.84
0.190	0.736	14.42
0.220	0.775	13.11
0.250	0.809	11.96
0.280	0.856	10.93
0.310	0.896	10.14
0.340	0.945	9.40
0.370	0.994	8.83
0.400	1.055	8.26
0.430	1.097	7.81
0.460	1.171	7.30
0.490	1.211	7.10
0.520	1.265	6.79
0.550	1.306	6.62
0.580	1.341	6.31
0.620	1.361	6.32
0.680	1.353	6.60
0.740	1.345	7.07
0.800	1.343	7.25
0.860	1.347	7.37
0.920	1.352	7.51
0.980	1.360	7.73
1.040	1.376	7.80
1.100	1.388	7.81
1.160	1.396	7.92
1.220	1.399	8.10
1.280	1.398	8.01
1.340	1.394	7.94
1.400	1.389	7.96
1.460	1.393	8.10
1.520	1.406	8.34
1.580	1.415	8.49
1.640	1.422	8.53
1.700	1.425	8.61
1.760	1.430	8.61
1.820	1.434	8.60

D-25

PITOT PRESSURE-YAW ANGLE SURVEYS

35 34

NSGA= 10 TSTAG=468.7  
X =5.099 TWALL=506.0  
Y =2.056 TGEN =454.2  
YG=1.183 TIME =167.8

NSGA= 10 TSTAG=460.2  
X =5.099 TWALL=510.3  
Y =1.556 TGEN =440.4  
YG=0.683 TIME =160.8

Z	PT BAR	ALFA
0.010	0.304	31.44
0.025	0.412	30.31
0.040	0.472	28.67
0.055	0.489	27.35
0.070	0.495	25.86
0.085	0.497	24.55
0.100	0.497	23.30
0.130	0.498	20.71
0.160	0.512	18.02
0.190	0.533	15.61
0.220	0.565	13.31
0.250	0.606	11.78
0.280	0.642	10.74
0.310	0.684	9.69
0.340	0.734	8.78
0.370	0.780	8.29
0.400	0.835	7.59
0.430	0.886	7.24
0.460	0.954	6.70
0.490	1.003	6.53
0.520	1.068	6.05
0.550	1.118	5.94
0.580	1.188	5.81
0.620	1.253	5.60
0.680	1.336	5.52
0.740	1.356	5.69
0.800	1.365	5.93
0.860	1.371	6.19
0.920	1.360	6.80
0.980	1.355	7.30
1.040	1.360	7.59
1.100	1.369	7.79
1.160	1.376	8.09
1.220	1.379	8.24
1.280	1.384	8.46
1.340	1.391	8.65
1.400	1.402	8.69
1.460	1.409	8.79
1.520	1.419	8.96
1.580	1.427	9.02
1.640	1.432	9.01
1.700	1.438	9.04
1.760	1.446	9.08
1.820	1.452	9.14

Z	PT BAR	ALFA
0.010	0.010	24.81
0.025	0.015	23.83
0.040	0.017	22.57
0.055	0.018	21.45
0.070	0.019	20.40
0.085	0.019	19.71
0.100	0.020	18.87
0.130	0.020	17.42
0.160	0.021	15.84
0.190	0.021	14.42
0.220	0.022	13.11
0.250	0.023	11.96
0.280	0.025	10.93
0.310	0.026	10.14
0.340	0.027	9.40
0.370	0.029	8.83
0.400	0.030	8.26
0.430	0.032	7.81
0.460	0.034	7.30
0.490	0.035	7.10
0.520	0.036	6.79
0.550	0.038	6.62
0.580	0.039	6.31
0.620	0.039	6.32
0.680	0.039	6.60
0.740	0.039	7.07
0.800	0.039	7.25
0.860	0.039	7.37
0.920	0.039	7.51
0.980	0.039	7.73
1.040	0.040	7.80
1.100	0.040	7.81
1.160	0.040	7.92
1.220	0.040	8.10
1.280	0.040	8.01
1.340	0.040	7.94
1.400	0.040	7.96
1.460	0.040	8.10
1.520	0.041	8.34
1.580	0.041	8.49
1.640	0.041	8.53
1.700	0.041	8.61
1.760	0.041	8.61
1.820	0.041	8.60



## STATIC PRESSURE SURVEYS

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## E-1

## STATIC PRESSURE SURVEYS

13 12 11 10

NSGA = 4	NSGA = 4	NSGA = 4	NSGA = 4
X = 7.579	X = 7.579	X = 7.579	X = 7.579
Y = 0.709	Y = 0.959	Y = 1.459	Y = 1.959
YG = 0.215	YG = 0.465	YG = 0.965	YG = 1.465
TSTAG = 452.5	TSTAG = 458.9	TSTAG = 449.8	TSTAG = 441.0
TWALL = 518.5	TWALL = 514.2	TWALL = 508.1	TWALL = 497.5
TGEN = 459.3	TGEN = 449.5	TGEN = 439.4	TGEN = 421.6
TIME = 94.2	TIME = 98.6	TIME = 91.5	TIME = 108.3

Z	P BAR	P BAR	P BAR	P BAR
0.0	1.321	1.310	1.290	1.277
0.085	1.320	1.304	1.297	1.273
0.100	1.320	1.304	1.296	1.273
0.130	1.320	1.305	1.294	1.272
0.160	1.320	1.306	1.291	1.270
0.190	1.315	1.307	1.289	1.269
0.220	1.319	1.304	1.288	1.268
0.250	1.318	1.304	1.287	1.267
0.280	1.322	1.307	1.286	1.267
0.310	1.307	1.311	1.284	1.267
0.340	1.301	1.313	1.285	1.267
0.370	1.303	1.310	1.284	1.269
0.400	1.303	1.304	1.284	1.269
0.430	1.311	1.303	1.284	1.270
0.460	1.326	1.310	1.285	1.270
0.490	1.338	1.318	1.292	1.274
0.520	1.346	1.322	1.306	1.281
0.550	1.334	1.322	1.321	1.294
0.580	1.322	1.311	1.321	1.302
0.620	1.314	1.304	1.308	1.297
0.680	1.313	1.318	1.306	1.293
0.740	1.320	1.329	1.319	1.306
0.800	1.330	1.341	1.332	1.330
0.860	1.331	1.332	1.332	1.321
0.920	1.321	1.316	1.325	1.309
0.980	1.321	1.309	1.319	1.302
1.040	1.320	1.312	1.315	1.303
1.100	1.321	1.322	1.312	1.308
1.160	1.321	1.326	1.307	1.310
1.220	1.326	1.334	1.309	1.309
1.280	1.326	1.334	1.307	1.309
1.340	1.328	1.331	1.311	1.312
1.400	1.327	1.334	1.326	1.313
1.460	1.329	1.338	1.334	1.312
1.520	1.338	1.347	1.327	1.316
1.580	1.344	1.351	1.322	1.322
1.640	1.352	1.358	1.311	1.324
1.700	1.354	1.358	1.332	1.348
1.760	1.349	1.358	1.343	1.347
1.820	1.339	1.358	1.340	1.348



## E-2

## STATIC PRESSURE SURVEYS

9 8 18 7

NSGA = 4	NSGA = 4	NSGA = 4	NSGA = 4
X = 7.579	X = 7.579	X = 7.579	X = 7.579
Y = 2.459	Y = 2.959	Y = 3.209	Y = 3.459
YG = 1.965	YG = 2.465	YG = 2.715	YG = 2.965
TSTAG = 476.5	TSTAG = 468.9	TSTAG = 445.5	TSTAG = 443.5
TWALL = 507.8	TWALL = 502.2	TWALL = 509.1	TWALL = 501.7
TGEN = 466.5	TGEN = 448.9	TGEN = 435.9	TGEN = 427.1
TIME = 90.1	TIME = 107.7	TIME = 123.7	TIME = 100.0

7	P BAR	P BAR	P BAR	P BAR
0.0	1.258	1.227	1.200	1.165
0.085	1.258	1.223	1.199	1.166
0.100	1.257	1.223	1.198	1.166
0.130	1.256	1.221	1.198	1.166
0.160	1.254	1.220	1.198	1.166
0.190	1.252	1.219	1.198	1.166
0.220	1.250	1.218	1.198	1.166
0.250	1.249	1.218	1.199	1.165
0.280	1.250	1.219	1.200	1.164
0.310	1.250	1.221	1.203	1.165
0.340	1.251	1.222	1.204	1.166
0.370	1.254	1.223	1.207	1.166
0.400	1.255	1.224	1.209	1.165
0.430	1.256	1.225	1.213	1.165
0.460	1.257	1.224	1.220	1.164
0.490	1.261	1.231	1.227	1.168
0.520	1.271	1.239	1.241	1.175
0.550	1.286	1.255	1.257	1.182
0.580	1.295	1.264	1.265	1.177
0.620	1.292	1.265	1.265	1.167
0.680	1.285	1.266	1.270	1.163
0.740	1.299	1.288	1.303	1.183
0.800	1.319	1.305	1.324	1.172
0.860	1.322	1.294	1.318	1.153
0.920	1.316	1.302	1.323	1.141
0.980	1.319	1.309	1.333	1.140
1.040	1.323	1.321	1.340	1.127
1.100	1.325	1.325	1.350	1.115
1.160	1.327	1.329	1.368	1.095
1.220	1.324	1.333	1.379	1.076
1.280	1.325	1.339	1.388	1.054
1.340	1.331	1.348	1.396	1.042
1.400	1.336	1.355	1.416	1.040
1.460	1.341	1.360	1.409	1.030
1.520	1.346	1.368	1.406	1.019
1.580	1.343	1.377	1.402	1.017
1.640	1.347	1.392	1.399	1.011
1.700	1.357	1.397	1.396	1.006
1.760	1.357	1.397	1.393	1.004
1.820	1.357	1.397	1.396	1.004

## E-3

## STATIC PRESSURE SURVEYS

19 6 20 22

NSGA = 4	NSGA = 4	NSGA = 4	NSGA = 4
X = 7.579	X = 7.579	X = 7.579	X = 7.579
Y = 3.709	Y = 3.959	Y = 4.209	Y = 4.709
YG = 3.215	YG = 3.465	YG = 3.715	YG = 4.215
TSTAG = 448.4	TSTAG = 449.8	TSTAG = 438.3	TSTAG = 441.2
TWALL = 496.8	TWALL = 491.0	TWALL = 507.2	TWALL = 502.2
TGEN = 431.7	TGEN = 432.3	TGEN = 423.9	TGEN = 426.0
TIME = 91.0	TIME = 112.5	TIME = 87.1	TIME = 76.2

Z	P BAR	P BAR	P BAR	P BAR
0.0	1.134	1.103	1.075	1.009
0.085	1.132	1.101	1.071	1.009
0.100	1.132	1.100	1.071	1.009
0.130	1.131	1.099	1.069	1.009
0.160	1.130	1.098	1.067	1.009
0.190	1.129	1.098	1.062	1.009
0.220	1.129	1.095	1.058	1.008
0.250	1.128	1.093	1.057	1.007
0.280	1.126	1.092	1.056	1.007
0.310	1.125	1.092	1.055	1.006
0.340	1.124	1.090	1.053	1.005
0.370	1.122	1.087	1.051	1.004
0.400	1.120	1.084	1.049	1.002
0.430	1.118	1.083	1.048	1.001
0.460	1.117	1.084	1.048	1.003
0.490	1.122	1.087	1.052	1.010
0.520	1.131	1.093	1.057	1.014
0.550	1.132	1.093	1.057	1.013
0.580	1.125	1.084	1.051	1.006
0.620	1.113	1.076	1.044	1.001
0.680	1.116	1.080	1.051	1.013
0.740	1.140	1.090	1.071	1.025
0.800	1.119	1.063	1.057	1.009
0.860	1.101	1.040	1.044	0.998
0.920	1.088	1.032	1.040	0.998
0.980	1.073	1.020	1.032	0.999
1.040	1.067	1.011	1.030	0.995
1.100	1.056	1.003	1.026	0.994
1.160	1.035	0.997	1.024	0.988
1.220	1.022	0.992	1.016	0.987
1.280	1.016	0.992	1.017	0.986
1.340	1.000	0.992	1.018	0.987
1.400	0.995	0.992	1.020	0.994
1.460	0.996	0.992	1.019	1.001
1.520	0.995	0.990	1.019	1.003
1.580	0.999	1.006	1.019	1.003
1.640	1.000	1.001	1.019	1.003
1.700	0.999	1.001	1.019	1.003
1.760	0.997	1.001	1.019	1.003
1.820	1.004	1.001	1.019	1.003



## E-4

## STATIC PRESSURE SURVEYS

33 34 35 11

NSGA = 4	NSGA = 4	NSGA = 4	NSGA = 10
X =5.079	X =5.079	X =5.079	X =7.599
Y =1.009	Y =1.459	Y =1.959	Y =1.556
YG =0.678	YG =1.128	YG =1.628	YG =0.255
TSTAG=472.6	TSTAG=450.3	TSTAG=464.4	TSTAG=470.9
TWALL=495.2	TWALL=497.9	TWALL=512.0	TWALL=517.4
TGEN =450.5	TGEN =436.7	TGEN =458.4	TGEN =466.9
TIME = 93.0	TIME = 92.7	TIME = 94.7	TIME = 89.1
Z	P BAR	P BAR	P BAR
0.0	1.277	1.254	1.217
0.085	1.284	1.257	1.222
0.100	1.285	1.258	1.223
0.130	1.288	1.259	1.225
0.160	1.290	1.260	1.227
0.190	1.293	1.262	1.229
0.220	1.294	1.261	1.230
0.250	1.292	1.260	1.232
0.280	1.292	1.260	1.234
0.310	1.292	1.260	1.237
0.340	1.290	1.260	1.239
0.370	1.288	1.260	1.238
0.400	1.288	1.262	1.242
0.430	1.287	1.262	1.242
0.460	1.289	1.261	1.243
0.490	1.297	1.263	1.248
0.520	1.312	1.274	1.258
0.550	1.320	1.285	1.272
0.580	1.315	1.291	1.277
0.620	1.306	1.285	1.273
0.680	1.306	1.280	1.275
0.740	1.300	1.287	1.284
0.800	1.296	1.295	1.291
0.860	1.295	1.301	1.298
0.920	1.285	1.312	1.307
0.980	1.283	1.313	1.312
1.040	1.298	1.302	1.312
1.100	1.318	1.304	1.312
1.160	1.327	1.311	1.327
1.220	1.335	1.318	1.337
1.280	1.346	1.316	1.344
1.340	1.346	1.330	1.339
1.400	1.343	1.354	1.353
1.460	1.349	1.363	1.374
1.520	1.362	1.363	1.390
1.580	1.372	1.374	1.394
1.640	1.369	1.381	1.401
1.700	1.365	1.391	1.400
1.760	1.373	1.394	1.405
1.820	1.377	1.396	1.377

## E-5

## STATIC PRESSURE SURVEYS

10 9 8 18

NSGA = 10	NSGA = 10	NSGA = 10	NSGA = 10
X = 7.599	X = 7.599	X = 7.599	X = 7.599
Y = 2.056	Y = 2.556	Y = 3.056	Y = 3.306
YG = 0.755	YG = 1.255	YG = 1.755	YG = 2.005
TSTAG=469.7	TSTAG=469.5	TSTAG=462.4	TSTAG=472.4
TWALL=513.1	TWALL=519.7	TWALL=500.2	TWALL=500.4
TGEN = 460.4	TGEN = 468.4	TGEN = 441.3	TGEN = 453.6
TIME = 99.3	TIME = 96.0	TIME = 97.4	TIME = 104.6

Z	P BAR	P BAR	P BAR	P BAR
0.0	1.931	1.816	1.688	1.618
0.085	1.920	1.810	1.680	1.615
0.100	1.918	1.808	1.678	1.610
0.130	1.914	1.806	1.677	1.608
0.160	1.909	1.798	1.676	1.608
0.190	1.902	1.792	1.674	1.609
0.220	1.897	1.787	1.673	1.608
0.250	1.889	1.784	1.673	1.607
0.280	1.881	1.783	1.672	1.606
0.310	1.873	1.784	1.674	1.610
0.340	1.866	1.780	1.677	1.614
0.370	1.856	1.778	1.679	1.617
0.400	1.852	1.776	1.685	1.624
0.430	1.846	1.775	1.688	1.630
0.460	1.851	1.773	1.691	1.640
0.490	1.872	1.774	1.696	1.647
0.520	1.890	1.782	1.702	1.656
0.550	1.886	1.798	1.712	1.667
0.580	1.869	1.813	1.725	1.681
0.620	1.868	1.819	1.753	1.700
0.680	1.879	1.800	1.778	1.744
0.740	1.897	1.811	1.775	1.760
0.800	1.889	1.850	1.785	1.774
0.860	1.882	1.872	1.822	1.803
0.920	1.886	1.877	1.844	1.835
0.980	1.891	1.884	1.854	1.848
1.040	1.903	1.896	1.867	1.858
1.100	1.915	1.909	1.888	1.878
1.160	1.931	1.914	1.910	1.901
1.220	1.953	1.927	1.922	1.930
1.280	1.957	1.942	1.933	1.942
1.340	1.954	1.985	1.946	1.952
1.400	1.955	1.991	1.956	1.959
1.460	1.958	1.982	1.998	1.978
1.520	1.963	1.974	2.011	2.012
1.580	1.970	1.967	2.017	2.026
1.640	1.974	1.964	2.019	2.042
1.700	1.973	1.963	2.016	2.053
1.760	1.973	1.957	2.015	2.041
1.820	1.980	1.957	2.025	2.039



## E-6

## STATIC PRESSURE SURVEYS

7 19 6 20

NSGA = 10	NSGA = 10	NSGA = 10	NSGA = 10
X = 7.599	X = 7.599	X = 7.599	X = 7.599
Y = 3.556	Y = 3.806	Y = 4.056	Y = 4.306
YG = 2.255	YG = 2.505	YG = 2.755	YG = 3.005
TSTAG=466.9	TSTAG=476.4	TSTAG=464.3	TSTAG=462.0
TWALL=495.7	TWALL=505.5	TWALL=510.0	TWALL=502.9
TGFN =446.5	TGFN =461.4	TGFN =451.0	TGFN =444.4
TIME =104.3	TIME = 98.7	TIME =101.9	TIME = 94.7

Z	P BAR	P BAR	P BAR	P BAR
0.0	1.562	1.550	1.533	1.511
0.085	1.574	1.550	1.536	1.510
0.100	1.570	1.548	1.536	1.510
0.130	1.567	1.544	1.532	1.509
0.160	1.567	1.540	1.530	1.503
0.190	1.566	1.542	1.529	1.505
0.220	1.566	1.542	1.534	1.507
0.250	1.566	1.542	1.532	1.504
0.280	1.569	1.543	1.529	1.497
0.310	1.573	1.547	1.529	1.490
0.340	1.579	1.552	1.532	1.486
0.370	1.586	1.558	1.538	1.483
0.400	1.594	1.565	1.544	1.481
0.430	1.604	1.573	1.552	1.480
0.460	1.613	1.583	1.560	1.477
0.490	1.623	1.592	1.571	1.474
0.520	1.632	1.603	1.583	1.471
0.550	1.643	1.613	1.596	1.465
0.580	1.655	1.625	1.610	1.461
0.620	1.676	1.645	1.634	1.457
0.680	1.724	1.687	1.683	1.456
0.740	1.754	1.732	1.736	1.453
0.800	1.773	1.777	1.773	1.447
0.860	1.808	1.813	1.822	1.445
0.920	1.860	1.862	1.886	1.448
0.980	1.877	1.900	1.931	1.444
1.040	1.883	1.919	1.955	1.422
1.100	1.888	1.930	1.984	1.402
1.160	1.907	1.944	2.003	1.382
1.220	1.929	1.964	2.031	1.347
1.280	1.951	1.991	2.061	1.294
1.340	1.981	2.023	2.091	1.209
1.400	2.001	2.043	2.133	1.075
1.460	2.013	2.066	2.133	1.029
1.520	2.029	2.079	2.133	1.025
1.580	2.057	2.089	2.133	1.035
1.640	2.115	2.101	2.133	1.033
1.700	2.128	2.101	2.133	1.035
1.760	2.113	2.101	2.133	1.031
1.820	2.098	2.101	2.133	1.031

## E-7

## STATIC PRESSURE SURVEYS

22 24 33 34

NSGA = 10	NSGA = 10	NSGA = 10	NSGA = 10
X = 7.599	X = 7.599	X = 5.099	X = 5.099
Y = 4.806	Y = 5.306	Y = 1.106	Y = 1.556
YG = 3.505	YG = 4.005	YG = 0.233	YG = 0.683
TSTAG=464.0	TSTAG=481.6	TSTAG=461.4	TSTAG=461.7
TWALL=498.0	TWALL=510.4	TWALL=497.2	TWALL=508.8
TGFN = 445.5	TGFN = 475.2	TGFN = 442.1	TGFN = 447.3
TIME = 101.7	TIME = 78.8	TIME = 98.8	TIME = 107.5

Z	P BAR	P BAR	P BAR	P BAR
0.0	1.438	1.312	1.937	1.810
0.085	1.451	1.313	1.929	1.815
0.100	1.449	1.313	1.922	1.814
0.130	1.445	1.313	1.908	1.814
0.160	1.443	1.313	1.895	1.814
0.190	1.443	1.313	1.887	1.805
0.220	1.439	1.305	1.878	1.800
0.250	1.430	1.297	1.873	1.795
0.280	1.423	1.292	1.872	1.790
0.310	1.420	1.284	1.873	1.786
0.340	1.415	1.278	1.859	1.784
0.370	1.411	1.270	1.840	1.782
0.400	1.407	1.261	1.835	1.780
0.430	1.402	1.251	1.867	1.778
0.460	1.398	1.239	1.916	1.782
0.490	1.393	1.228	1.905	1.785
0.520	1.386	1.221	1.863	1.801
0.550	1.381	1.212	1.848	1.827
0.580	1.377	1.190	1.854	1.838
0.620	1.376	1.146	1.849	1.831
0.680	1.360	1.097	1.874	1.823
0.740	1.342	1.089	1.850	1.836
0.800	1.330	1.046	1.855	1.844
0.860	1.330	1.014	1.837	1.843
0.920	1.279	1.005	1.826	1.864
0.980	1.187	1.004	1.795	1.885
1.040	1.077	1.004	1.842	1.914
1.100	1.018	1.001	1.888	1.924
1.160	0.996	0.998	1.918	1.936
1.220	0.992	0.997	1.937	1.949
1.280	0.988	0.996	1.974	1.950
1.340	0.984	0.996	1.974	1.943
1.400	0.990	1.000	1.908	1.924
1.460	0.996	1.002	1.933	1.931
1.520	1.008	1.000	1.964	1.961
1.580	1.013	1.003	1.976	1.995
1.640	1.016	1.003	1.984	2.012
1.700	1.011	1.001	1.982	2.017
1.760	1.011	1.002	1.990	2.025
1.820	1.011	1.004	2.007	2.032



## E-8

## STATIC PRESSURE SURVEYS

35 24 33 34

NSGA = 10	NSGA = 10	NSGA = 10	NSGA = 10
X = 5.099	X = 7.599	X = 5.099	X = 5.099
Y = 2.056	Y = 5.306	Y = 1.106	Y = 1.556
YG = 1.183	YG = 4.005	YG = 0.233	YG = 0.683
TSTAG=468.7	TSTAG=481.6	TSTAG=461.4	TSTAG=461.7
TWALL=516.7	TWALL=510.4	TWALL=497.2	TWALL=508.8
TGEN = 466.1	TGEN = 475.2	TGEN = 442.1	TGEN = 447.3
TIME = 110.4	TIME = 78.8	TIME = 98.8	TIME = 107.5

Z	P BAR	P BAR	P BAR	P BAR
0.0	1.659	1.312	1.937	1.810
0.085	1.676	1.313	1.929	1.815
0.100	1.670	1.313	1.922	1.814
0.130	1.670	1.313	1.908	1.814
0.160	1.671	1.313	1.895	1.814
0.190	1.672	1.313	1.887	1.805
0.220	1.673	1.305	1.878	1.800
0.250	1.671	1.297	1.873	1.795
0.280	1.676	1.292	1.872	1.790
0.310	1.680	1.284	1.873	1.786
0.340	1.684	1.278	1.859	1.784
0.370	1.692	1.270	1.840	1.782
0.400	1.697	1.261	1.835	1.780
0.430	1.705	1.251	1.867	1.778
0.460	1.711	1.239	1.916	1.782
0.490	1.719	1.228	1.905	1.785
0.520	1.727	1.221	1.863	1.801
0.550	1.733	1.212	1.848	1.827
0.580	1.742	1.190	1.854	1.838
0.620	1.768	1.146	1.849	1.831
0.680	1.800	1.097	1.874	1.823
0.740	1.800	1.089	1.850	1.836
0.800	1.807	1.046	1.855	1.844
0.860	1.831	1.014	1.837	1.843
0.920	1.849	1.005	1.826	1.864
0.980	1.868	1.004	1.795	1.885
1.040	1.882	1.004	1.842	1.914
1.100	1.899	1.001	1.888	1.924
1.160	1.912	0.998	1.918	1.936
1.220	1.913	0.997	1.937	1.949
1.280	1.926	0.996	1.974	1.950
1.340	1.949	0.996	1.974	1.943
1.400	1.972	1.000	1.908	1.924
1.460	1.986	1.002	1.933	1.931
1.520	2.002	1.000	1.964	1.961
1.580	2.013	1.003	1.976	1.995
1.640	2.02	1.003	1.984	2.012
1.700	2.037	1.001	1.982	2.017
1.760	2.058	1.002	1.990	2.025
1.820	2.060	1.004	2.007	2.032

# APPENDIX F

## TOTAL TEMPERATURE SURVEYS

1.000	0.000	1.000	0.000
1.001	0.001	1.001	0.001
1.002	0.002	1.002	0.002
1.003	0.003	1.003	0.003
1.004	0.004	1.004	0.004
1.005	0.005	1.005	0.005
1.006	0.006	1.006	0.006
1.007	0.007	1.007	0.007
1.008	0.008	1.008	0.008
1.009	0.009	1.009	0.009
1.010	0.010	1.010	0.010
1.011	0.011	1.011	0.011
1.012	0.012	1.012	0.012
1.013	0.013	1.013	0.013
1.014	0.014	1.014	0.014
1.015	0.015	1.015	0.015
1.016	0.016	1.016	0.016
1.017	0.017	1.017	0.017
1.018	0.018	1.018	0.018
1.019	0.019	1.019	0.019
1.020	0.020	1.020	0.020
1.021	0.021	1.021	0.021
1.022	0.022	1.022	0.022
1.023	0.023	1.023	0.023
1.024	0.024	1.024	0.024
1.025	0.025	1.025	0.025
1.026	0.026	1.026	0.026
1.027	0.027	1.027	0.027
1.028	0.028	1.028	0.028
1.029	0.029	1.029	0.029
1.030	0.030	1.030	0.030
1.031	0.031	1.031	0.031
1.032	0.032	1.032	0.032
1.033	0.033	1.033	0.033
1.034	0.034	1.034	0.034
1.035	0.035	1.035	0.035
1.036	0.036	1.036	0.036
1.037	0.037	1.037	0.037
1.038	0.038	1.038	0.038
1.039	0.039	1.039	0.039
1.040	0.040	1.040	0.040
1.041	0.041	1.041	0.041
1.042	0.042	1.042	0.042
1.043	0.043	1.043	0.043
1.044	0.044	1.044	0.044
1.045	0.045	1.045	0.045
1.046	0.046	1.046	0.046
1.047	0.047	1.047	0.047
1.048	0.048	1.048	0.048
1.049	0.049	1.049	0.049
1.050	0.050	1.050	0.050



F-1

TOTAL TEMPERATURE SURVEYS

1 13

NSGA= 0 TSTAG=450.5  
X =3.561 TWALL=514.6  
Y =3.900 TGEN =437.9  
YG=3.900 TIME = 74.0

NSGA= 4 TSTAG=451.1  
X =7.579 TWALL=494.1  
Y =0.709 TGEN =436.6  
YG=0.215 TIME = 93.7

Z	TT BAR
0.015	1.067
0.025	1.066
0.040	1.063
0.055	1.061
0.070	1.058
0.085	1.055
0.100	1.050
0.130	1.047
0.160	1.044
0.190	1.042
0.220	1.035
0.250	1.035
0.280	1.034
0.310	1.031
0.340	1.029
0.370	1.025
0.400	1.023
0.430	1.021
0.460	1.017
0.490	1.015
0.520	1.012
0.550	1.008
0.580	1.004
0.620	1.001
0.680	1.001
0.740	0.999
0.800	0.999
0.860	0.999
0.920	1.000
0.980	1.000
1.040	0.999
1.100	0.998
1.160	0.997
1.220	0.997
1.280	0.999
1.340	0.998
1.400	0.998
1.460	0.997
1.520	0.997
1.580	0.997
1.640	0.997
1.700	0.997
1.760	0.997
1.820	0.996

Z	TT BAR
0.015	1.020
0.025	1.024
0.040	1.029
0.055	1.033
0.070	1.033
0.085	1.032
0.100	1.033
0.130	1.030
0.160	1.027
0.190	1.024
0.220	1.022
0.250	1.019
0.280	1.016
0.310	1.013
0.340	1.011
0.370	1.008
0.400	1.005
0.430	1.003
0.460	1.001
0.490	0.999
0.520	0.998
0.550	0.997
0.580	0.997
0.620	0.997
0.680	0.997
0.740	0.997
0.800	0.997
0.860	0.997
0.920	0.996
0.980	0.997
1.040	0.997
1.100	0.997
1.160	0.997
1.220	0.997
1.280	0.998
1.340	0.997
1.400	0.997
1.460	0.998
1.520	0.998
1.580	0.998
1.640	0.997
1.700	0.998
1.760	0.998
1.820	0.997

## TOTAL TEMPERATURE SURFYS

12 11

NSGA= 4 TSTAG=453.9  
 X =7.579 TWALL=499.4  
 Y =0.959 TGEN =444.2  
 YG=0.465 TIME = 83.9

NSGA= 4 TSTAG=454.7  
 X =7.579 TWALL=504.2  
 Y =1.459 TGEN =457.9  
 YG=0.965 TIME = 90.1

Z	TT BAR
0.015	1.031
0.025	1.032
0.040	1.033
0.055	1.034
0.070	1.034
0.085	1.033
0.100	1.032
0.130	1.029
0.160	1.026
0.190	1.024
0.220	1.023
0.250	1.022
0.280	1.020
0.310	1.019
0.340	1.017
0.370	1.015
0.400	1.013
0.430	1.010
0.460	1.007
0.490	1.005
0.520	1.002
0.550	1.001
0.580	0.999
0.620	0.998
0.680	0.997
0.740	0.997
0.800	0.997
0.860	0.997
0.920	0.997
0.980	0.997
1.040	0.996
1.100	0.997
1.160	0.998
1.220	0.998
1.280	0.998
1.340	0.997
1.400	0.998
1.460	0.998
1.520	0.998
1.580	0.997
1.640	0.998
1.700	0.998
1.760	0.998
1.820	0.997

Z	TT BAR
0.015	1.040
0.025	1.039
0.040	1.038
0.055	1.039
0.070	1.039
0.085	1.038
0.100	1.036
0.130	1.034
0.160	1.033
0.190	1.030
0.220	1.028
0.250	1.027
0.280	1.027
0.310	1.026
0.340	1.024
0.370	1.022
0.400	1.021
0.430	1.019
0.460	1.017
0.490	1.013
0.520	1.010
0.550	1.008
0.580	1.007
0.620	1.003
0.680	0.999
0.740	0.998
0.800	0.998
0.860	0.999
0.920	0.998
0.980	0.999
1.040	0.999
1.100	0.998
1.160	0.998
1.220	0.999
1.280	0.998
1.340	0.999
1.400	0.998
1.460	0.998
1.520	0.998
1.580	0.998
1.640	0.997
1.700	0.997
1.760	0.997
1.820	0.998



## F-3

## TOTAL TEMPERATURE SURVEYS

10 9

NSGA= 4 TSTAG=456.1  
 X =7.579 TWALL=516.5  
 Y =1.959 TGEN =468.2  
 YG=1.465 TIME = 83.0

NSGA= 4 TSTAG=448.2  
 X =7.579 TWALL=493.5  
 Y =2.459 TGEN =431.9  
 YG=1.965 TIME = 86.5

Z	TT BAR
0.015	1.054
0.025	1.052
0.040	1.051
0.055	1.051
0.070	1.051
0.085	1.050
0.100	1.049
0.130	1.045
0.160	1.042
0.190	1.039
0.220	1.038
0.250	1.037
0.280	1.035
0.310	1.032
0.340	1.030
0.370	1.029
0.400	1.027
0.430	1.025
0.460	1.023
0.490	1.019
0.520	1.017
0.550	1.015
0.580	1.010
0.620	1.006
0.680	1.005
0.740	1.003
0.800	1.000
0.860	1.000
0.920	1.001
0.980	1.001
1.040	0.999
1.100	0.999
1.160	0.999
1.220	1.000
1.280	1.000
1.340	1.000
1.400	0.999
1.460	0.999
1.520	0.998
1.580	0.998
1.640	0.998
1.700	0.998
1.760	0.998
1.820	0.999

Z	TT BAR
0.015	1.049
0.025	1.046
0.040	1.046
0.055	1.045
0.070	1.044
0.085	1.042
0.100	1.040
0.130	1.036
0.160	1.032
0.190	1.030
0.220	1.028
0.250	1.026
0.280	1.024
0.310	1.024
0.340	1.022
0.370	1.021
0.400	1.019
0.430	1.017
0.460	1.016
0.490	1.014
0.520	1.012
0.550	1.009
0.580	1.006
0.620	1.006
0.680	1.000
0.740	0.998
0.800	0.998
0.860	0.997
0.920	0.998
0.980	0.997
1.040	0.997
1.100	0.997
1.160	0.997
1.220	0.997
1.280	0.997
1.340	0.997
1.400	0.996
1.460	0.997
1.520	0.997
1.580	0.997
1.640	0.997
1.700	0.996
1.760	0.997
1.820	0.997

F-4

TOTAL TEMPERATURE SURVEYS

8 7

NSGA= 4 TSTAG=460.1  
X =7.579 TWALL=506.0  
Y =2.959 TGEN =463.4  
YG=2.465 TIME = 84.6

NSGA= 4 TSTAG=452.1  
X =7.579 TWALL=502.3  
Y =2.459 TGEN =449.0  
YG=2.965 TIME = 85.1

Z	TT BAR
0.015	1.042
0.025	1.042
0.040	1.041
0.055	1.040
0.070	1.040
0.085	1.038
0.100	1.037
0.130	1.035
0.160	1.032
0.190	1.029
0.220	1.027
0.250	1.025
0.280	1.024
0.310	1.023
0.340	1.021
0.370	1.020
0.400	1.019
0.430	1.018
0.460	1.016
0.490	1.014
0.520	1.011
0.550	1.008
0.580	1.006
0.620	1.003
0.680	0.999
0.740	0.998
0.800	0.997
0.860	0.997
0.920	0.997
0.980	0.998
1.040	0.997
1.100	0.997
1.160	0.997
1.220	0.996
1.280	0.997
1.340	0.997
1.400	0.996
1.460	0.996
1.520	0.997
1.580	0.997
1.640	0.997
1.700	0.997
1.760	0.997
1.820	0.997

Z	TT BAR
0.015	1.049
0.025	1.046
0.040	1.044
0.055	1.043
0.070	1.041
0.085	1.039
0.100	1.038
0.130	1.035
0.160	1.031
0.190	1.030
0.220	1.029
0.250	1.027
0.280	1.025
0.310	1.024
0.340	1.022
0.370	1.020
0.400	1.018
0.430	1.016
0.460	1.015
0.490	1.013
0.520	1.010
0.550	1.007
0.580	1.004
0.620	1.002
0.680	1.000
0.740	0.999
0.800	0.998
0.860	0.998
0.920	0.998
0.980	0.997
1.040	0.997
1.100	0.998
1.160	0.997
1.220	0.997
1.280	0.996
1.340	0.997
1.400	0.996
1.460	0.996
1.520	0.996
1.580	0.996
1.640	0.996
1.700	0.996
1.760	0.996
1.820	0.996



F-5

TOTAL TEMPRATURE SURVEYS

6 20

NSGA= 4 TSTAG=454.4  
X =7.579 TWALL=515.3  
Y =3.959 TGEN =463.7  
YG=3.465 TIME = 89.5

NSGA= 4 TSTAG=461.4  
X =7.579 TWALL=519.0  
Y =4.209 TGEN =479.0  
YG=3.715 TIME = 63.1

Z	TT BAR
0.015	1.055
0.025	1.054
0.040	1.053
0.055	1.052
0.070	1.051
0.085	1.049
0.100	1.047
0.130	1.043
0.160	1.041
0.190	1.039
0.220	1.037
0.250	1.035
0.280	1.033
0.310	1.030
0.340	1.028
0.370	1.026
0.400	1.025
0.430	1.023
0.460	1.021
0.490	1.018
0.520	1.016
0.550	1.012
0.580	1.009
0.620	1.005
0.680	1.001
0.740	1.001
0.800	1.000
0.860	0.999
0.920	0.999
0.980	0.999
1.040	0.999
1.100	0.999
1.160	0.998
1.220	0.999
1.280	0.998
1.340	0.997
1.400	0.997
1.460	0.996
1.520	0.997
1.580	0.997
1.640	0.997
1.700	0.997
1.760	0.996
1.820	0.996

Z	TT BAR
0.015	1.052
0.025	1.052
0.040	1.052
0.055	1.051
0.070	1.049
0.085	1.048
0.100	1.047
0.130	1.045
0.160	1.040
0.190	1.037
0.220	1.036
0.250	1.034
0.280	1.032
0.310	1.031
0.340	1.029
0.370	1.027
0.400	1.026
0.430	1.023
0.460	1.020
0.490	1.017
0.520	1.014
0.550	1.012
0.580	1.010
0.620	1.007
0.680	1.004
0.740	1.002
0.800	1.001
0.860	1.000
0.920	1.000
0.980	0.999
1.040	0.998
1.100	0.998
1.160	0.998
1.220	0.998
1.280	0.998
1.340	0.998
1.400	0.998
1.460	0.998
1.520	0.998
1.580	0.998
1.640	0.998
1.700	0.997
1.760	0.997
1.820	0.997

## TOTAL TEMPERATURE SURVEYS

22 33

MSG A= 4 TSTAG=448.1  
 X =7.579 TWALL=505.8  
 Y =4.709 TGEN =439.2  
 YG=4.215 TIME = 68.1

MSG A= 4 TSTAG=439.4  
 X =5.079 TWALL=492.1  
 Y =1.009 TGEN =423.0  
 YG=0.678 TIME =128.4

Z	TT BAR
0.015	1.056
0.025	1.056
0.040	1.055
0.055	1.053
0.070	1.051
0.085	1.049
0.100	1.047
0.130	1.044
0.160	1.041
0.190	1.038
0.220	1.035
0.250	1.033
0.280	1.031
0.310	1.030
0.340	1.028
0.370	1.026
0.400	1.023
0.430	1.020
0.460	1.018
0.490	1.014
0.520	1.012
0.550	1.010
0.580	1.007
0.620	1.004
0.680	1.001
0.740	1.000
0.800	1.000
0.860	1.000
0.920	0.999
0.980	0.999
1.040	0.998
1.100	0.998
1.160	0.998
1.220	0.997
1.280	0.998
1.340	0.998
1.400	0.998
1.460	0.998
1.520	0.998
1.580	0.998
1.640	0.998
1.700	0.997
1.760	0.997
1.820	0.997

Z	TT BAR
0.015	1.046
0.025	1.045
0.040	1.044
0.055	1.044
0.070	1.043
0.085	1.040
0.100	1.038
0.130	1.036
0.160	1.034
0.190	1.031
0.220	1.028
0.250	1.027
0.280	1.026
0.310	1.024
0.340	1.023
0.370	1.022
0.400	1.019
0.430	1.017
0.460	1.014
0.490	1.010
0.520	1.006
0.550	1.004
0.580	1.002
0.620	1.000
0.680	0.998
0.740	1.000
0.800	0.999
0.860	1.000
0.920	0.998
0.980	0.998
1.040	0.998
1.100	0.999
1.160	0.998
1.220	0.998
1.280	0.999
1.340	0.999
1.400	1.000
1.460	0.998
1.520	0.998
1.580	0.999
1.640	0.999
1.700	0.999
1.760	0.999
1.820	0.999



## TOTAL TEMPERATURE SURVEYS

34 35

NSGA= 4 TSTAG=451.4  
 X =5.079 TWALL=507.1  
 Y =1.459 TGEN =454.1  
 YG=1.128 TIME = 71.2

NSGA= 4 TSTAG=453.4  
 X =5.079 TWALL=519.3  
 Y =1.959 TGEN =468.2  
 YG=1.628 TIME = 76.6

Z	TT BAR
0.015	1.057
0.025	1.056
0.040	1.056
0.055	1.056
0.070	1.053
0.085	1.052
0.100	1.050
0.130	1.045
0.160	1.042
0.190	1.038
0.220	1.036
0.250	1.034
0.280	1.031
0.310	1.029
0.340	1.027
0.370	1.025
0.400	1.023
0.430	1.022
0.460	1.019
0.490	1.017
0.520	1.014
0.550	1.011
0.580	1.008
0.620	1.004
0.680	1.000
0.740	0.999
0.800	0.999
0.860	0.999
0.920	0.999
0.980	0.999
1.040	0.999
1.100	0.998
1.160	0.999
1.220	0.999
1.280	0.999
1.340	1.000
1.400	1.000
1.460	1.000
1.520	0.999
1.580	0.999
1.640	0.998
1.700	0.998
1.760	0.998
1.820	0.998

Z	TT BAR
0.015	1.071
0.025	1.068
0.040	1.064
0.055	1.063
0.070	1.061
0.085	1.058
0.100	1.056
0.130	1.053
0.160	1.049
0.190	1.046
0.220	1.043
0.250	1.039
0.280	1.037
0.310	1.035
0.340	1.031
0.370	1.029
0.400	1.027
0.430	1.025
0.460	1.022
0.490	1.019
0.520	1.016
0.550	1.012
0.580	1.008
0.620	1.005
0.680	1.003
0.740	1.002
0.800	1.001
0.860	0.999
0.920	0.999
0.980	1.000
1.040	1.000
1.100	1.000
1.160	0.999
1.220	0.999
1.280	0.999
1.340	0.999
1.400	0.999
1.460	1.000
1.520	0.999
1.580	0.999
1.640	0.998
1.700	0.998
1.760	0.998
1.820	0.999

## TOTAL TEMPERATURE SURVEYS 11 10

NSGA= 10 TSTAG=435.0  
 X =7.599 TWALL=492.7  
 Y =1.556 TGEN =422.1  
 YG=0.255 TIME =100.2

NSGA= 10 TSTAG=455.0  
 X =7.599 TWALL=502.8  
 Y =2.056 TGEN =454.6  
 YG=0.755 TIME = 91.4

Z	TT BAR
0.015	1.025
0.025	1.027
0.040	1.029
0.055	1.029
0.070	1.027
0.085	1.025
0.100	1.023
0.130	1.019
0.160	1.016
0.190	1.014
0.220	1.010
0.250	1.007
0.280	1.005
0.310	1.004
0.340	1.002
0.370	1.001
0.400	1.001
0.430	1.001
0.460	1.001
0.490	1.001
0.520	1.001
0.550	1.001
0.580	1.001
0.620	1.001
0.680	1.001
0.740	1.001
0.800	1.001
0.860	1.001
0.920	1.001
0.980	1.001
1.040	1.001
1.100	1.001
1.160	1.001
1.220	1.001
1.280	1.002
1.340	1.002
1.400	1.001
1.460	1.002
1.520	1.002
1.580	1.002
1.640	1.002
1.700	1.002
1.760	1.002
1.820	1.003

Z	TT BAR
0.015	1.025
0.025	1.027
0.040	1.032
0.055	1.035
0.070	1.033
0.085	1.032
0.100	1.029
0.130	1.026
0.160	1.024
0.190	1.023
0.220	1.023
0.250	1.022
0.280	1.021
0.310	1.020
0.340	1.020
0.370	1.017
0.400	1.016
0.430	1.014
0.460	1.011
0.490	1.009
0.520	1.006
0.550	1.004
0.580	1.002
0.620	1.001
0.680	1.000
0.740	1.000
0.800	1.001
0.860	1.000
0.920	1.000
0.980	1.000
1.040	1.000
1.100	0.999
1.160	1.000
1.220	1.000
1.280	1.000
1.340	0.999
1.400	0.999
1.460	1.000
1.520	1.000
1.580	0.999
1.640	1.000
1.700	1.000
1.760	1.000
1.820	1.000



## TOTAL TEMPERATURE SURVEYS

9 8

NSGA= 10 TSTAG=442.0  
 X =7.599 TWALL=485.6  
 Y =2.556 TGEN =426.3  
 YG=1.255 TIME =101.9

NSGA= 10 TSTAG=445.0  
 X =7.599 TWALL=497.3  
 Y =3.056 TGEN =432.5  
 YG=1.755 TIME = 94.9

Z	TT BAR
0.015	1.026
0.025	1.029
0.040	1.033
0.055	1.036
0.070	1.036
0.085	1.035
0.100	1.032
0.130	1.027
0.160	1.023
0.190	1.022
0.220	1.021
0.250	1.022
0.280	1.024
0.310	1.023
0.340	1.022
0.370	1.021
0.400	1.021
0.430	1.020
0.460	1.019
0.490	1.016
0.520	1.015
0.550	1.013
0.580	1.012
0.620	1.008
0.680	1.004
0.740	1.000
0.800	1.000
0.860	1.000
0.920	1.000
0.980	1.001
1.040	0.999
1.100	0.999
1.160	1.000
1.220	1.000
1.280	1.001
1.340	1.001
1.400	1.000
1.460	1.001
1.520	1.001
1.580	1.001
1.640	1.000
1.700	1.000
1.760	1.001
1.820	1.001

Z	TT BAR
0.015	1.040
0.025	1.043
0.040	1.047
0.055	1.050
0.070	1.050
0.085	1.049
0.100	1.046
0.130	1.039
0.160	1.033
0.190	1.030
0.220	1.029
0.250	1.029
0.280	1.030
0.310	1.031
0.340	1.031
0.370	1.031
0.400	1.029
0.430	1.026
0.460	1.025
0.490	1.022
0.520	1.021
0.550	1.018
0.580	1.016
0.620	1.014
0.680	1.009
0.740	1.003
0.800	1.000
0.860	1.000
0.920	1.000
0.980	0.999
1.040	0.999
1.100	0.999
1.160	0.999
1.220	1.000
1.280	0.999
1.340	0.999
1.400	1.000
1.460	1.000
1.520	1.000
1.580	1.001
1.640	1.000
1.700	1.000
1.760	1.000
1.820	1.000

## TOTAL TEMPERATURE SURVEYS

7 6

NSGA= 10 TSTAG=437.6  
 X =7.599 TWALL=492.4  
 Y =3.556 TGEN =423.6  
 YG=2.255 TIME = 92.3

NSGA= 10 TSTAG=438.5  
 X =7.599 TWALL=505.1  
 Y =4.056 TGEN =429.6  
 YG=2.755 TIME =109.7

Z	TT BAR
0.015	1.053
0.025	1.053
0.040	1.055
0.055	1.058
0.070	1.058
0.085	1.057
0.100	1.054
0.130	1.046
0.160	1.040
0.190	1.036
0.220	1.033
0.250	1.033
0.280	1.034
0.310	1.034
0.340	1.033
0.370	1.032
0.400	1.030
0.430	1.028
0.460	1.026
0.490	1.023
0.520	1.022
0.550	1.020
0.580	1.018
0.620	1.015
0.680	1.009
0.740	1.004
0.800	1.002
0.860	1.002
0.920	1.001
0.980	1.001
1.040	1.001
1.100	1.001
1.160	1.001
1.220	1.001
1.280	1.001
1.340	1.001
1.400	1.002
1.460	1.002
1.520	1.001
1.580	1.002
1.640	1.002
1.700	1.002
1.760	1.001
1.820	1.002

Z	TT BAR
0.015	1.079
0.025	1.077
0.040	1.074
0.055	1.073
0.070	1.071
0.085	1.071
0.100	1.069
0.130	1.064
0.160	1.058
0.190	1.054
0.220	1.052
0.250	1.049
0.280	1.047
0.310	1.044
0.340	1.042
0.370	1.037
0.400	1.035
0.430	1.035
0.460	1.034
0.490	1.031
0.520	1.030
0.550	1.028
0.580	1.025
0.620	1.022
0.680	1.015
0.740	1.011
0.800	1.007
0.860	1.004
0.920	1.004
0.980	1.004
1.040	1.004
1.100	1.004
1.160	1.004
1.220	1.004
1.280	1.004
1.340	1.003
1.400	1.003
1.460	1.004
1.520	1.004
1.580	1.003
1.640	1.003
1.700	1.003
1.760	1.001
1.820	1.004



## TOTAL TEMPERATURE SURVEYS

20 22

NSGA= 10 TSTAG=442.2  
 X =7.599 TWALL=508.8  
 Y =4.306 TGEN =437.0  
 YG=3.005 TIME = 89.3

NSGA= 10 TSTAG=442.8  
 X =7.599 TWALL=498.2  
 Y =4.806 TGEN =432.2  
 YG=3.505 TIME = 87.6

Z	TT BAR
0.015	1.078
0.025	1.076
0.040	1.073
0.055	1.071
0.070	1.070
0.085	1.067
0.100	1.065
0.130	1.061
0.160	1.057
0.190	1.054
0.220	1.050
0.250	1.047
0.280	1.046
0.310	1.044
0.340	1.041
0.370	1.038
0.400	1.035
0.430	1.033
0.460	1.033
0.490	1.032
0.520	1.029
0.550	1.027
0.580	1.026
0.620	1.023
0.680	1.017
0.740	1.010
0.800	1.006
0.860	1.005
0.920	1.005
0.980	1.004
1.040	1.004
1.100	1.003
1.160	1.002
1.220	1.002
1.280	1.002
1.340	1.001
1.400	1.000
1.460	0.998
1.520	0.999
1.580	0.998
1.640	0.998
1.700	0.998
1.760	0.998
1.820	0.998

Z	TT BAR
0.015	1.070
0.025	1.066
0.040	1.062
0.055	1.059
0.070	1.058
0.085	1.055
0.100	1.053
0.130	1.049
0.160	1.047
0.190	1.044
0.220	1.040
0.250	1.038
0.280	1.037
0.310	1.034
0.340	1.032
0.370	1.031
0.400	1.029
0.430	1.027
0.460	1.026
0.490	1.023
0.520	1.022
0.550	1.019
0.580	1.016
0.620	1.012
0.680	1.007
0.740	1.004
0.800	1.001
0.860	1.001
0.920	1.000
0.980	1.000
1.040	0.998
1.100	0.998
1.160	0.998
1.220	0.998
1.280	0.998
1.340	0.998
1.400	0.998
1.460	0.998
1.520	0.998
1.580	0.998
1.640	0.998
1.700	0.998
1.760	0.997
1.820	0.998

## TOTAL TEMPERATURE SURVEYS

24 33

NSGA= 10 TSTAG=444.9  
 X =7.599 TWALL=492.4  
 Y =5.306 TGEN =432.9  
 YG=4.005 TIME = 94.9

NSGA= 10 TSTAG=434.0  
 X =5.099 TWALL=484.1  
 Y =1.106 TGEN =417.3  
 YG=0.233 TIME = 87.3

Z	TT BAR
0.015	1.053
0.025	1.051
0.040	1.043
0.055	1.046
0.070	1.043
0.085	1.041
0.100	1.039
0.130	1.037
0.160	1.034
0.190	1.032
0.220	1.030
0.250	1.028
0.280	1.027
0.310	1.025
0.340	1.024
0.370	1.023
0.400	1.022
0.430	1.019
0.460	1.017
0.490	1.015
0.520	1.012
0.550	1.009
0.580	1.007
0.620	1.002
0.680	1.000
0.740	1.000
0.800	0.997
0.860	0.998
0.920	0.998
0.980	0.998
1.040	0.998
1.100	0.997
1.160	0.998
1.220	0.998
1.280	0.998
1.340	0.998
1.400	0.998
1.460	0.998
1.520	0.998
1.580	0.997
1.640	0.998
1.700	0.998
1.760	0.998
1.820	0.998

Z	TT BAR
0.015	1.027
0.025	1.032
0.040	1.038
0.055	1.037
0.070	1.035
0.085	1.033
0.100	1.031
0.130	1.027
0.160	1.024
0.190	1.022
0.220	1.020
0.250	1.017
0.280	1.014
0.310	1.012
0.340	1.009
0.370	1.006
0.400	1.005
0.430	1.003
0.460	1.002
0.490	1.001
0.520	1.000
0.550	1.001
0.580	1.001
0.620	1.000
0.680	1.000
0.740	1.000
0.800	1.000
0.860	1.000
0.920	1.000
0.980	1.000
1.040	1.000
1.100	1.001
1.160	1.001
1.220	1.001
1.280	1.001
1.340	1.001
1.400	1.001
1.460	1.002
1.520	1.001
1.580	1.001
1.640	1.001
1.700	1.002
1.760	1.002
1.820	1.002



## TOTAL TEMPERATURE SURVEYS

34 35

NSGA= 10 TSTAG=438.0  
 X =5.099 TWALL=498.0  
 Y =1.556 TGEN =426.5  
 YG=0.683 TIME = 76.9

NSGA= 10 TSTAG=434.7  
 X =5.099 TWALL=508.6  
 Y =2.056 TGEN =426.9  
 YG=1.183 TIME = 79.9

Z	TT BAR
0.015	1.042
0.025	1.044
0.040	1.048
0.055	1.049
0.070	1.048
0.085	1.045
0.100	1.042
0.130	1.037
0.160	1.035
0.190	1.033
0.220	1.033
0.250	1.032
0.280	1.032
0.310	1.030
0.340	1.028
0.370	1.027
0.400	1.024
0.430	1.021
0.460	1.018
0.490	1.016
0.520	1.012
0.550	1.009
0.580	1.008
0.620	1.004
0.680	1.003
0.740	1.002
0.800	1.001
0.860	1.001
0.920	1.001
0.980	1.002
1.040	1.001
1.100	1.001
1.160	1.001
1.220	1.001
1.280	1.001
1.340	1.000
1.400	1.000
1.460	1.000
1.520	1.001
1.580	1.001
1.640	1.001
1.700	1.002
1.760	1.001
1.820	1.000

Z	TT BAR
0.015	1.069
0.025	1.069
0.040	1.069
0.055	1.069
0.070	1.067
0.085	1.064
0.100	1.060
0.130	1.052
0.160	1.049
0.190	1.050
0.220	1.049
0.250	1.051
0.280	1.048
0.310	1.047
0.340	1.044
0.370	1.041
0.400	1.039
0.430	1.033
0.460	1.031
0.490	1.028
0.520	1.026
0.550	1.023
0.580	1.020
0.620	1.015
0.680	1.009
0.740	1.005
0.800	1.003
0.860	1.005
0.920	1.003
0.980	1.002
1.040	1.002
1.100	1.003
1.160	1.003
1.220	1.004
1.280	1.003
1.340	1.002
1.400	1.003
1.460	1.003
1.520	1.003
1.580	1.003
1.640	1.002
1.700	1.002
1.760	1.002
1.820	1.002

[illegible]

## APPENDIX G

## PITOT PRESSURE-PITCH ANGLE SURVEYS



G-1

PITOT PRESSURE-PITCH ANGLE SURVEYS

NSGA= 4 TSTAG=454.7  
X =7.58 TWALL=497.4  
Z =1.435 TGEN =428.3

NSGA= 4 TSTAG=455.5  
X =7.58 TWALL=511.2  
Z =0.835 TGEN =433.9

YG	PT BAR	GAMMA
0.502	1.152	0.50
0.458	1.156	0.44
0.424	1.160	0.39
0.385	1.164	0.38
0.346	1.170	0.32
0.310	1.177	0.36
0.275	1.179	0.38
0.238	1.164	0.44
0.198	1.156	0.44
0.161	1.156	0.35
0.123	1.155	0.10
0.106	1.144	-0.05
0.095	1.118	-0.12
0.083	1.044	-0.22
0.077	0.993	-0.25
0.070	0.933	-0.32
0.063	0.870	-0.33
0.059	0.824	-0.32
0.050	0.754	-0.42
0.046	0.720	-0.43
0.037	0.637	-0.42
0.034	0.612	-0.41
0.029	0.581	-0.39
0.025	0.546	-0.60
0.015	0.463	-0.86
0.014	0.424	-1.08
0.012	0.375	-1.32
0.008	0.316	-1.64
0.007	0.275	-1.85
0.003	0.261	-1.94

YG	PT BAR	GAMMA
0.516	1.161	-0.63
0.450	1.168	-0.60
0.415	1.175	-0.68
0.378	1.176	-0.72
0.345	1.181	-0.81
0.305	1.187	-0.93
0.266	1.182	-0.89
0.231	1.172	-0.88
0.193	1.170	-0.89
0.157	1.167	-0.93
0.123	1.166	-1.12
0.110	1.162	-1.21
0.091	1.125	-1.39
0.085	1.089	-1.46
0.076	1.016	-1.57
0.070	0.963	-1.64
0.063	0.898	-1.67
0.055	0.834	-1.74
0.048	0.761	-1.77
0.043	0.712	-1.73
0.037	0.655	-1.70
0.032	0.612	-1.73
0.024	0.566	-1.90
0.020	0.521	-2.18
0.013	0.422	-2.55
0.008	0.312	-3.12
0.007	0.282	-3.28
0.005	0.263	-3.56

## PITOT PRESSURE-PITCH ANGLE SURVEYS

NSGA= 4    TSTAG=467.4  
 X =7.58    TWALL=517.2  
 Z =0.235    TGEN =464.6

NSGA= 10    TSTAG=445.6  
 X =7.60    TWALL=492.9  
 Z =1.435    TGEN =421.8

YG	PT BAR	GAMMA
0.518	0.763	-2.41
0.488	0.780	-2.47
0.450	0.793	-2.49
0.414	0.803	-2.56
0.380	0.823	-2.63
0.346	0.841	-2.73
0.303	0.868	-2.83
0.266	0.887	-2.94
0.234	0.911	-2.99
0.190	0.932	-3.06
0.160	0.948	-3.17
0.120	0.913	-3.91
0.115	0.898	-3.99
0.107	0.881	-4.08
0.096	0.838	-4.25
0.088	0.805	-4.30
0.082	0.761	-4.37
0.074	0.722	-4.36
0.068	0.684	-4.29
0.057	0.635	-4.14
0.050	0.590	-3.92
0.044	0.559	-3.68
0.034	0.504	-3.50
0.028	0.476	-3.58
0.023	0.462	-3.63
0.022	0.448	-3.74
0.020	0.430	-3.68
0.017	0.409	-3.80
0.015	0.385	-3.70
0.012	0.346	-4.02
0.009	0.297	-4.39
0.006	0.260	-4.59
0.003	0.245	-4.74

YG	PT BAR	GAMMA
0.573	1.414	0.06
0.531	1.416	-0.02
0.494	1.417	-0.15
0.467	1.418	-0.20
0.425	1.417	-0.25
0.382	1.414	-0.31
0.344	1.411	-0.34
0.308	1.408	-0.41
0.273	1.421	-0.41
0.234	1.427	-0.33
0.199	1.418	-0.46
0.162	1.413	-0.39
0.127	1.406	-0.38
0.087	1.336	-0.63
0.084	1.310	-0.66
0.080	1.285	-0.63
0.078	1.251	-0.66
0.074	1.212	-0.63
0.070	1.173	-0.68
0.065	1.139	-0.74
0.063	1.097	-0.74
0.058	1.061	-0.79
0.055	1.016	-0.82
0.050	0.965	-0.88
0.047	0.920	-0.89
0.041	0.871	-0.88
0.038	0.832	-1.08
0.034	0.788	-1.17
0.029	0.750	-1.17
0.025	0.718	-1.47
0.017	0.634	-1.94
0.016	0.595	-2.11
0.011	0.477	-2.39
0.010	0.413	-2.76
0.009	0.380	-2.78
0.006	0.367	-2.91
0.003	0.364	-3.08



## PITOT PRESSURE-PITCH ANGLE SURVEYS

NSGA= 10 TSTAG=465.2  
 X =7.60 TWALL=515.0  
 Z =0.835 TGEN =458.9

YG	PT BAR	GAMMA
0.528	1.393	-1.45
0.498	1.395	-1.51
0.462	1.395	-1.51
0.423	1.399	-1.48
0.385	1.400	-1.60
0.345	1.407	-1.71
0.309	1.401	-1.76
0.272	1.417	-1.77
0.236	1.421	-1.70
0.198	1.412	-1.61
0.159	1.410	-1.91
0.124	1.404	-1.96
0.118	1.402	-1.98
0.108	1.397	-2.02
0.099	1.390	-2.16
0.092	1.373	-2.21
0.085	1.336	-2.27
0.080	1.299	-2.28
0.077	1.279	-2.32
0.074	1.246	-2.37
0.068	1.185	-2.40
0.062	1.137	-2.44
0.059	1.087	-2.52
0.054	1.025	-2.55
0.049	0.966	-2.57
0.045	0.931	-2.62
0.038	0.860	-2.60
0.034	0.820	-2.76
0.032	0.785	-2.84
0.028	0.754	-2.95
0.024	0.724	-3.22
0.020	0.669	-3.45
0.016	0.617	-3.60
0.013	0.519	-3.87
0.011	0.441	-4.29
0.006	0.379	-4.53
0.003	0.359	-4.53

NSGA= 10 TSTAG=440.1  
 X =7.60 TWALL=483.0  
 Z =0.235 TGEN =416.9

YG	PT BAR	GAMMA
0.535	1.161	-2.92
0.499	1.193	-2.90
0.463	1.210	-2.81
0.430	1.241	-2.80
0.389	1.275	-2.81
0.349	1.293	-2.71
0.311	1.321	-2.80
0.275	1.338	-2.59
0.239	1.353	-2.48
0.205	1.378	-2.35
0.185	1.391	-2.58
0.163	1.395	-2.59
0.146	1.393	-2.59
0.126	1.399	-2.67
0.109	1.387	-2.77
0.104	1.366	-2.84
0.097	1.341	-2.93
0.094	1.316	-2.95
0.090	1.300	-2.91
0.087	1.269	-2.93
0.086	1.247	-2.94
0.080	1.201	-2.90
0.078	1.170	-2.85
0.074	1.130	-2.83
0.071	1.096	-2.82
0.068	1.064	-2.84
0.062	1.030	-2.79
0.060	0.997	-2.67
0.058	0.970	-2.70
0.054	0.938	-2.57
0.049	0.903	-2.45
0.044	0.858	-2.30
0.042	0.829	-2.26
0.039	0.796	-2.26
0.034	0.758	-2.14
0.030	0.732	-2.01
0.027	0.697	-1.98
0.023	0.672	-1.93
0.014	0.541	-1.78
0.011	0.505	-1.67
0.007	0.394	-1.71
0.004	0.347	-1.71

1. 1000000  
 2. 1000000  
 3. 1000000

APPENDIX H

TOTAL TEMPERATURE SURVEYS  
IN THE IMMEDIATE VICINITY OF THE SHOCK GENERATOR



H-1

TOTAL TEMPERATURE SURVYS

NSGA= 4  
X =7.58  
Z =1.480

TSTAG=453.1  
TWALL=520.7  
TGEN =464.3

RUN =2189  
TEST= 1

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.012	524.0	489.6	461.8	454.2	1.035
0.013	524.2	488.5	461.2	453.7	1.036
0.013	522.5	488.3	460.9	452.8	1.034
0.012	523.6	487.4	460.7	451.9	1.032
0.016	523.6	486.3	460.2	450.9	1.031
0.016	524.0	484.4	460.4	450.6	1.030
0.015	524.1	483.5	459.8	450.0	1.030
0.020	522.2	482.4	459.8	449.3	1.029
0.020	522.3	481.6	459.4	445.6	1.021
0.027	523.2	481.4	459.0	442.5	1.015
0.032	522.8	480.6	459.2	434.0	0.995
0.034	523.3	479.2	458.7	429.2	0.985
0.039	523.3	478.5	458.4	427.7	0.982
0.042	521.8	478.1	457.9	426.6	0.981
0.041	523.0	478.4	458.0	424.9	0.976
0.044	522.6	476.3	457.6	424.6	0.977
0.050	522.7	475.6	457.8	424.3	0.975
0.051	522.5	474.7	457.1	424.9	0.979
0.052	522.1	474.1	456.9	424.7	0.978
0.059	522.1	474.1	456.8	424.4	0.978
0.062	522.2	472.7	456.5	425.1	0.980
0.064	521.5	471.9	456.2	426.5	0.984
0.070	521.9	472.2	455.9	426.4	0.984
0.071	521.9	470.9	455.7	426.9	0.986
0.069	521.7	469.7	455.6	426.7	0.986
0.071	521.7	468.4	455.2	426.6	0.986
0.078	521.8	467.9	454.9	426.0	0.986
0.081	521.4	467.7	454.9	427.2	0.989
0.081	521.4	466.9	454.4	427.4	0.990
0.087	521.2	466.8	454.6	427.6	0.990
0.091	521.3	466.1	454.1	428.3	0.993
0.090	520.8	465.6	453.5	428.6	0.995
0.093	521.3	464.4	453.8	428.6	0.994
0.099	521.4	463.3	453.1	428.6	0.996
0.099	520.7	462.2	452.9	429.2	0.998
0.106	520.8	463.0	453.2	428.9	0.996
0.109	520.9	461.6	452.7	429.0	0.997
0.115	520.4	461.3	452.3	428.3	0.997
0.120	519.3	460.1	452.4	428.2	0.996
0.120	519.7	460.6	451.7	427.0	0.995
0.125	520.5	459.4	451.7	426.3	0.993
0.131	520.0	458.9	451.9	426.1	0.993
0.140	519.5	458.3	451.3	425.9	0.994
0.151	520.2	458.4	451.4	426.3	0.994

## TOTAL TEMPERATURE SURVEYS

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.164	520.1	457.6	451.0	427.0	0.997
0.177	519.3	457.5	450.9	427.3	0.998
0.191	519.6	456.9	450.5	428.0	1.000
0.204	519.4	456.3	450.2	427.3	0.999
0.203	520.0	456.5	450.5	427.3	0.998
0.210	519.8	455.0	450.2	427.3	0.999
0.215	519.0	454.4	449.5	426.8	1.000
0.215	519.2	454.5	449.7	427.0	0.999
0.225	519.2	454.1	449.2	426.2	0.999
0.227	519.4	453.2	449.1	427.0	1.001
0.233	518.3	452.0	449.0	426.0	0.999
0.237	518.6	453.2	448.7	424.6	0.996
0.239	519.0	451.8	448.7	424.3	0.995
0.245	519.2	451.3	448.3	424.2	0.996
0.251	518.5	450.5	448.3	423.9	0.995
0.255	518.9	450.0	447.9	423.9	0.996
0.257	518.9	450.6	447.9	423.2	0.994
0.267	518.4	449.9	447.7	423.3	0.995
0.267	517.7	450.2	447.0	422.6	0.995
0.272	518.0	449.5	447.4	422.6	0.994
0.272	518.1	449.1	447.1	422.8	0.995
0.276	518.2	447.8	446.8	422.5	0.995
0.285	517.7	447.1	446.5	422.7	0.997
0.285	517.9	448.1	446.5	422.3	0.996
0.290	518.0	447.1	446.4	421.8	0.995
0.294	517.2	446.6	446.2	422.4	0.997
0.294	517.6	446.5	445.9	421.7	0.996
0.293	517.6	446.7	445.5	421.1	0.995
0.293	517.4	444.8	445.7	421.3	0.995



## TOTAL TEMPERATURE SURVEYS

NSGA= 4  
X =7.58  
Z =1.480

TSTAG=427.5  
TWALL=485.8  
TGEN =408.9

RUN =2189  
TEST= 8

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.009	488.9	413.1	431.5	392.7	0.958
0.010	489.2	414.0	431.6	392.7	0.958
0.014	489.1	413.5	431.4	392.0	0.957
0.018	489.0	413.1	431.2	392.5	0.958
0.019	488.9	412.4	431.0	392.6	0.959
0.024	489.1	412.4	430.8	392.0	0.958
0.024	488.0	412.7	430.7	392.2	0.959
0.028	487.5	414.4	430.6	392.2	0.959
0.027	488.7	412.7	430.5	391.5	0.957
0.030	488.2	411.6	430.2	391.3	0.957
0.030	487.9	411.5	430.0	390.7	0.956
0.034	487.9	411.5	429.8	390.0	0.955
0.035	487.8	411.3	429.8	390.6	0.957
0.037	487.6	411.3	430.0	390.7	0.956
0.037	487.5	410.8	429.7	391.0	0.958
0.037	487.2	411.4	429.5	390.4	0.957
0.039	487.7	411.0	429.6	390.8	0.958
0.039	487.4	410.6	429.5	390.8	0.958
0.039	487.3	410.0	429.3	390.7	0.958
0.043	486.8	410.3	429.3	390.8	0.958
0.044	487.3	409.9	429.2	390.6	0.958
0.046	486.7	410.2	429.2	390.6	0.958
0.050	486.7	409.2	428.9	391.2	0.960
0.049	486.3	409.9	428.6	391.3	0.961
0.052	486.5	409.7	428.6	391.2	0.961
0.056	486.2	410.4	428.7	391.7	0.962
0.055	486.6	409.7	428.6	393.3	0.966
0.057	486.2	409.0	428.2	393.5	0.967
0.062	486.6	409.4	428.3	393.6	0.967
0.068	486.1	409.6	428.4	394.2	0.969
0.072	486.2	409.5	428.2	394.9	0.971
0.073	485.4	409.5	427.8	395.5	0.973
0.073	485.3	409.8	427.8	396.3	0.975
0.073	485.9	409.2	427.8	396.1	0.975
0.073	485.7	408.5	427.9	397.0	0.976
0.073	485.6	408.0	427.5	396.3	0.976
0.074	485.4	408.8	427.5	396.5	0.976
0.074	485.4	407.0	427.6	396.9	0.977
0.075	485.5	408.4	427.3	396.6	0.977
0.083	485.1	408.2	426.9	396.1	0.977
0.093	485.2	408.6	427.0	398.0	0.981
0.099	485.5	407.7	427.1	400.4	0.987
0.104	485.2	406.6	427.0	401.6	0.990
0.110	485.1	407.8	426.8	402.3	0.992

## TOTAL TEMPERATURE SURVEYS

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.117	485.4	408.3	426.9	402.7	0.993
0.124	485.2	406.8	426.6	402.6	0.993
0.129	484.8	407.5	426.4	402.5	0.994
0.135	484.7	407.6	426.3	402.2	0.993
0.141	484.4	408.0	426.4	401.9	0.992
0.145	485.0	406.5	426.2	401.8	0.992
0.152	484.4	406.7	425.9	402.0	0.993
0.159	484.4	406.8	425.9	401.8	0.993
0.166	484.4	407.2	426.1	402.3	0.994
0.173	484.3	406.5	425.7	402.4	0.995
0.179	483.7	407.6	425.4	402.5	0.996
0.186	484.1	407.2	425.4	402.7	0.996
0.192	484.2	406.9	425.4	402.2	0.995
0.198	484.1	406.4	425.2	402.7	0.997
0.206	483.8	406.6	425.1	402.4	0.997
0.214	484.4	407.1	425.0	402.7	0.997
0.221	483.9	406.8	424.9	402.6	0.997
0.229	483.8	406.4	424.7	402.4	0.997
0.236	483.2	406.6	424.5	402.1	0.997
0.242	483.9	406.8	424.5	401.2	0.995
0.249	484.0	405.6	424.6	401.1	0.994
0.257	483.3	405.9	424.1	400.6	0.994
0.265	483.2	406.5	424.1	400.3	0.994
0.273	483.6	406.0	424.1	400.5	0.994
0.283	483.4	405.7	424.0	400.6	0.995
0.290	482.0	406.0	423.8	400.4	0.994
0.290	483.0	406.5	423.7	400.1	0.994
0.289	483.2	405.5	423.6	400.1	0.994
0.290	483.0	405.0	423.3	400.0	0.995



H-5

TOTAL TEMPERATURE SURVEYS

NSGA= 4  
X =7.58  
Z =0.880

TSTAG=444.6  
TWALL=516.2  
TGEN =444.8

RUN =2189  
TEST= 2

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.009	520.8	462.7	451.6	433.2	1.010
0.009	520.6	462.2	450.7	432.7	1.010
0.016	520.3	461.2	451.1	432.4	1.009
0.020	520.2	459.6	450.6	432.2	1.010
0.020	520.6	459.2	450.4	430.9	1.007
0.020	520.5	459.2	450.0	429.8	1.005
0.025	519.4	458.7	450.0	429.0	1.003
0.027	519.1	457.8	449.8	422.9	0.990
0.030	518.3	457.6	449.7	414.9	0.971
0.030	519.2	456.6	449.5	413.7	0.969
0.035	519.3	455.4	449.0	413.8	0.970
0.035	519.3	455.4	448.8	412.8	0.968
0.039	518.5	454.2	448.7	413.4	0.970
0.041	518.6	454.3	448.5	413.0	0.969
0.045	518.6	454.1	448.3	412.0	0.967
0.046	518.7	452.9	448.0	412.8	0.970
0.051	518.8	453.9	448.1	412.5	0.969
0.052	518.4	452.9	447.9	413.6	0.972
0.056	517.2	451.7	447.4	414.0	0.974
0.056	517.5	451.1	447.1	414.2	0.975
0.059	517.9	451.5	447.4	415.0	0.977
0.059	517.6	449.6	447.1	414.7	0.976
0.062	517.6	448.5	446.9	414.9	0.977
0.067	517.5	448.6	446.8	415.6	0.979
0.069	517.7	448.7	446.5	416.4	0.982
0.077	517.3	447.9	446.6	416.6	0.982
0.079	517.0	447.8	446.0	418.3	0.987
0.088	516.4	447.4	445.7	419.4	0.991
0.089	516.7	447.1	445.7	421.6	0.996
0.092	516.9	446.2	445.8	421.6	0.996
0.098	516.8	445.8	445.5	422.1	0.997
0.098	516.5	445.2	445.3	422.8	1.000
0.103	516.4	444.7	445.2	422.6	0.999
0.109	516.9	445.0	445.2	422.6	0.999
0.113	516.6	444.1	444.8	422.4	1.000
0.120	516.0	443.8	444.7	422.2	0.999
0.120	515.6	443.0	444.5	421.8	0.999
0.128	516.3	444.1	444.2	421.9	1.000
0.127	516.4	443.5	444.4	421.3	0.998
0.132	515.9	442.1	443.9	420.7	0.998
0.137	515.7	441.4	444.1	420.9	0.998
0.143	515.6	441.8	443.9	420.0	0.996
0.149	515.6	441.2	443.5	419.3	0.995
0.154	515.3	441.1	443.6	419.4	0.995

## TOTAL TEMPERATURE SURVEYS

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.159	514.9	440.1	443.1	418.8	0.995
0.163	515.0	439.9	443.0	418.5	0.994
0.167	515.4	439.9	442.9	418.5	0.995
0.167	515.6	439.7	442.9	418.0	0.993
0.173	514.8	439.2	442.4	417.6	0.994
0.177	514.6	438.9	442.2	417.9	0.995
0.184	514.4	437.9	442.4	417.7	0.994
0.187	514.5	438.5	442.2	417.6	0.994
0.194	514.0	438.0	442.1	417.7	0.995
0.195	514.3	438.1	442.0	417.4	0.994
0.201	514.2	438.3	441.5	417.4	0.995
0.201	514.6	436.7	441.5	417.3	0.995
0.210	514.4	436.3	441.5	417.0	0.994
0.212	514.0	436.4	441.1	417.0	0.995
0.221	514.0	436.7	441.1	417.3	0.996
0.231	514.1	436.2	441.2	417.6	0.996
0.240	514.0	436.2	441.0	417.2	0.996
0.249	513.9	435.3	440.7	417.0	0.996
0.258	513.2	435.5	440.4	417.0	0.997
0.260	513.5	435.8	440.5	417.3	0.997
0.263	513.6	435.1	440.6	416.8	0.996
0.269	513.0	434.3	440.2	416.8	0.997
0.272	513.3	433.7	439.8	416.2	0.996
0.278	513.2	433.9	439.9	416.4	0.996
0.278	513.5	434.3	439.8	416.6	0.997
0.284	512.4	433.0	439.4	416.6	0.998
0.289	513.1	433.0	439.2	416.5	0.998
0.289	512.6	433.6	438.3	416.3	1.000
0.288	513.3	432.6	438.3	415.7	0.998
0.287	513.1	431.5	438.2	415.7	0.999
0.288	513.0	431.1	438.2	415.1	0.997



H-7

TOTAL TEMPERATURE SURVEYS

NSGA= 4

X =7.58

Z =0.880

TSTAG=428.9

TWALL=490.3

TGEN =411.7

RUN =2189

TEST= 7

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.008	494.1	417.2	431.9	396.2	0.966
0.013	494.5	416.7	431.3	395.8	0.966
0.013	494.0	416.2	431.3	395.7	0.966
0.018	493.6	415.9	431.8	395.5	0.964
0.022	493.5	415.5	431.7	394.9	0.963
0.023	493.4	415.6	431.5	395.2	0.964
0.023	493.3	414.7	431.6	395.0	0.963
0.028	493.2	415.1	431.1	394.9	0.964
0.029	493.0	414.9	431.1	393.6	0.961
0.028	492.5	414.1	431.1	392.0	0.957
0.034	492.4	415.3	430.8	391.7	0.957
0.034	492.6	415.0	430.9	390.9	0.955
0.032	492.5	414.6	430.9	391.9	0.957
0.036	492.4	413.9	430.8	391.4	0.956
0.041	491.9	414.1	430.8	391.7	0.957
0.041	492.0	414.1	430.7	392.7	0.960
0.042	492.2	414.9	430.6	392.6	0.960
0.048	491.6	413.2	430.5	392.9	0.961
0.052	491.2	413.5	430.3	393.5	0.963
0.051	491.3	412.4	430.4	393.7	0.963
0.051	491.1	413.1	430.2	394.3	0.965
0.055	491.5	412.4	430.2	394.0	0.964
0.060	491.2	412.5	430.1	395.5	0.968
0.066	490.1	412.1	429.8	395.8	0.969
0.073	490.4	413.1	429.8	397.5	0.973
0.080	490.9	412.0	429.7	399.0	0.977
0.087	490.8	412.5	429.8	401.3	0.983
0.088	490.8	411.9	429.4	403.4	0.989
0.088	490.4	411.1	429.4	404.5	0.991
0.090	489.9	411.1	429.2	404.8	0.993
0.096	490.7	411.8	429.2	405.1	0.994
0.101	490.3	411.2	429.3	406.3	0.996
0.108	490.2	410.6	429.0	407.1	0.999
0.111	490.0	410.9	429.0	407.2	0.999
0.111	490.2	410.9	429.0	407.2	0.999
0.115	490.3	411.8	428.9	406.9	0.999
0.121	489.9	410.4	428.6	406.4	0.998
0.127	489.7	411.0	428.6	406.4	0.998
0.130	489.5	410.9	428.6	405.6	0.996
0.129	489.9	411.3	428.4	405.1	0.996
0.131	489.6	410.2	428.3	405.2	0.996
0.137	489.2	410.2	428.3	404.8	0.995
0.145	489.3	409.9	428.2	404.3	0.994
0.150	489.4	410.4	428.3	403.6	0.992

## TOTAL TEMPERATURE SURVEYS

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.151	489.5	410.1	428.2	402.9	0.990
0.158	489.1	409.7	427.9	403.0	0.991
0.163	488.4	410.3	427.7	402.7	0.991
0.169	489.2	410.3	427.6	402.4	0.991
0.174	489.2	409.7	427.8	402.3	0.990
0.180	488.9	409.0	427.6	402.6	0.991
0.187	488.5	409.5	427.6	402.1	0.990
0.194	488.7	409.3	427.7	402.4	0.990
0.200	489.1	409.7	427.6	402.1	0.990
0.208	488.6	409.5	427.1	402.2	0.991
0.215	488.0	409.0	427.1	402.3	0.992
0.221	488.0	409.7	427.0	402.2	0.991
0.227	488.7	409.7	426.8	402.4	0.992
0.233	488.6	408.8	426.7	402.4	0.993
0.240	488.3	408.7	426.6	402.4	0.993
0.246	488.1	408.6	426.6	402.2	0.992
0.253	488.6	409.0	426.6	402.0	0.992
0.260	488.3	408.5	426.5	402.5	0.993
0.267	487.7	409.2	426.3	401.8	0.992
0.272	487.3	408.4	426.0	401.9	0.993
0.279	487.5	409.5	426.0	401.8	0.993
0.284	488.0	407.9	426.1	402.1	0.993
0.287	487.8	408.9	426.1	402.0	0.993
0.288	487.3	408.9	425.8	401.6	0.993
0.289	487.7	408.4	425.8	401.6	0.993



H-9

## TOTAL TEMPERATURE SURVEYS

NSGA= 4  
X =7.58  
Z =0.280

TSTAG=435.6  
TWALL=509.3  
TGEN =426.2

RUN =2189  
TEST= 3

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.010	514.5	436.2	441.3	420.3	1.003
0.015	513.8	435.5	440.8	420.0	1.003
0.016	513.2	435.3	440.7	419.8	1.003
0.016	513.3	435.2	440.6	419.8	1.003
0.020	513.2	434.3	440.4	419.4	1.002
0.020	513.4	435.6	440.1	418.9	1.002
0.020	513.1	434.0	439.1	418.2	1.003
0.025	512.8	433.2	439.1	417.8	1.002
0.025	512.4	433.4	439.3	411.4	0.986
0.026	512.9	433.5	439.2	407.9	0.978
0.030	512.5	432.3	439.0	407.7	0.978
0.032	512.2	432.5	438.5	407.0	0.977
0.032	511.6	432.3	439.1	406.9	0.976
0.039	511.7	431.9	439.0	407.2	0.976
0.047	512.3	430.9	438.8	407.1	0.977
0.055	511.6	431.5	439.0	407.0	0.976
0.063	511.8	430.9	438.6	408.4	0.980
0.064	510.9	431.3	438.5	409.8	0.984
0.064	511.3	430.2	438.3	410.6	0.986
0.068	511.6	430.2	438.3	410.2	0.985
0.074	511.8	429.6	437.3	410.3	0.988
0.073	510.6	429.2	437.3	410.8	0.989
0.079	510.1	429.3	437.8	411.6	0.990
0.083	510.5	430.2	437.6	412.0	0.991
0.082	510.8	429.1	437.6	412.2	0.992
0.087	510.4	428.7	437.3	413.0	0.994
0.092	509.9	428.0	437.1	413.8	0.997
0.093	510.5	428.3	437.0	414.5	0.999
0.097	510.4	427.9	436.8	414.1	0.998
0.105	510.1	427.0	436.9	414.7	0.999
0.108	509.9	427.6	436.6	415.7	1.002
0.108	509.5	427.7	436.5	417.0	1.005
0.113	509.7	426.4	436.4	416.2	1.004
0.117	510.2	425.9	436.4	417.0	1.006
0.118	509.8	426.6	436.2	417.4	1.007
0.119	509.5	425.5	436.0	417.9	1.009
0.128	509.8	427.0	436.1	417.0	1.007
0.136	509.5	425.8	436.1	417.6	1.008
0.138	508.7	425.9	435.6	417.3	1.008
0.137	508.7	424.8	435.4	417.3	1.009
0.137	508.8	425.4	435.5	417.3	1.009
0.143	509.2	425.5	435.3	417.5	1.010
0.151	508.7	424.4	434.9	416.6	1.008
0.156	508.6	424.3	435.3	416.7	1.008

## TOTAL TEMPERATURE SURFYS

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.156	508.7	425.0	434.8	417.3	1.010
0.162	508.9	424.1	435.0	416.0	1.007
0.170	508.7	423.3	434.8	417.3	1.010
0.177	507.6	424.0	434.5	417.5	1.012
0.180	507.6	424.2	434.3	417.0	1.011
0.179	508.4	423.8	434.5	417.5	1.011
0.183	508.3	423.0	434.3	416.2	1.009
0.191	507.7	422.5	434.1	416.3	1.010
0.199	507.8	423.9	434.1	417.3	1.012
0.209	508.3	422.5	433.8	416.8	1.011
0.210	507.6	422.2	433.6	416.6	1.011
0.210	507.2	422.4	433.5	416.9	1.012
0.216	507.1	422.9	433.5	415.9	1.010
0.224	507.6	421.6	433.4	416.2	1.011
0.229	507.8	422.2	433.3	415.8	1.010
0.230	507.4	421.2	433.0	416.1	1.012
0.230	506.9	421.5	432.9	415.8	1.011
0.233	507.4	421.8	433.0	416.1	1.012
0.241	507.4	421.1	432.8	415.9	1.011
0.249	506.7	421.0	432.7	416.3	1.013
0.254	506.7	421.5	432.5	415.6	1.011
0.254	507.0	421.5	432.4	415.7	1.012
0.257	507.0	421.0	432.3	415.4	1.012
0.265	506.5	420.9	432.2	415.9	1.013
0.269	506.1	421.6	432.0	415.8	1.013
0.270	506.8	420.7	432.0	416.8	1.016
0.270	506.8	420.0	431.8	415.6	1.013
0.270	505.9	420.2	431.4	415.4	1.014
0.270	506.1	420.3	431.5	415.3	1.013
0.276	506.4	419.5	431.4	414.4	1.011
0.283	506.3	419.1	431.3	415.3	1.014
0.290	506.1	418.9	431.0	415.3	1.014
0.290	506.0	419.9	431.2	415.1	1.013
0.291	505.7	419.4	431.0	415.2	1.014
0.291	505.3	419.5	431.0	415.3	1.014
0.291	504.7	419.9	430.6	415.4	1.016



H-11

TOTAL TEMPERATURE SURVEYS

NSGA= 4  
X =7.58  
Z =0.080

TSTAG=428.9  
TWALL=502.5  
TGEN =415.0

RUIN =2189  
TEST= 4

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.013	507.2	422.3	433.6	423.7	1.029
0.018	506.9	420.7	433.5	423.5	1.028
0.018	506.8	421.3	433.1	423.1	1.028
0.023	506.5	421.5	432.9	423.3	1.029
0.023	506.3	421.7	433.0	421.0	1.024
0.026	505.8	420.1	432.8	421.1	1.024
0.029	505.7	420.7	432.6	417.8	1.017
0.029	505.7	420.6	432.4	417.9	1.017
0.029	506.0	419.1	432.4	418.4	1.018
0.035	505.6	419.6	432.5	418.0	1.017
0.038	505.1	419.0	432.2	417.7	1.017
0.039	504.9	418.5	432.0	417.8	1.018
0.039	505.1	418.6	432.1	418.0	1.018
0.048	505.2	418.1	431.7	418.5	1.021
0.048	505.2	419.1	431.9	417.0	1.016
0.050	505.0	418.4	431.7	416.9	1.017
0.055	503.7	418.9	431.7	416.4	1.015
0.061	504.4	418.1	431.5	416.6	1.016
0.060	504.8	418.3	431.2	415.5	1.014
0.065	504.4	417.1	431.2	415.3	1.014
0.068	505.6	417.4	431.2	416.3	1.016
0.068	504.3	417.3	430.7	415.5	1.016
0.073	504.0	417.6	430.9	415.4	1.015
0.080	504.0	416.7	430.7	415.6	1.016
0.080	504.0	417.1	430.5	415.6	1.016
0.088	504.0	416.9	430.5	415.7	1.016
0.089	503.3	416.4	430.3	415.6	1.017
0.088	503.6	417.2	430.2	415.7	1.017
0.093	503.7	416.1	430.2	415.4	1.016
0.097	503.7	416.2	430.0	415.8	1.018
0.098	503.4	415.8	429.9	415.7	1.018
0.102	503.2	415.9	430.0	415.3	1.017
0.108	503.1	415.7	430.0	415.5	1.017
0.109	502.7	415.8	429.7	415.6	1.018
0.114	502.6	415.1	429.4	414.9	1.017
0.117	501.7	415.1	429.4	415.3	1.018
0.117	502.5	415.8	429.3	415.9	1.020
0.120	502.8	413.7	429.1	415.3	1.019
0.126	502.0	414.1	428.8	415.0	1.019
0.127	501.9	415.0	429.0	415.0	1.018
0.131	502.3	414.4	428.9	415.4	1.019
0.136	502.3	415.2	428.8	415.4	1.020
0.136	502.0	414.1	428.6	415.1	1.019
0.142	501.3	414.9	428.5	414.7	1.019

## TOTAL TEMPERATURE SURVEYS

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.146	501.6	414.6	428.5	415.3	1.020
0.145	502.0	414.1	428.4	414.6	1.019
0.149	502.2	413.6	429.9	414.6	1.015
0.155	501.7	413.1	428.0	415.1	1.021
0.156	501.1	413.1	427.9	414.4	1.019
0.158	501.5	413.4	427.9	415.0	1.021
0.162	501.7	412.7	427.8	414.6	1.020
0.168	501.3	412.8	427.3	414.8	1.022
0.171	500.8	412.7	427.5	414.4	1.020
0.175	501.6	413.6	427.6	414.5	1.020
0.173	501.2	412.5	427.3	414.7	1.022
0.179	501.4	411.7	427.3	414.5	1.021
0.186	501.0	412.0	426.9	414.2	1.021
0.187	500.8	412.4	426.9	414.0	1.021
0.189	500.7	412.4	426.9	413.5	1.020
0.196	500.8	411.4	426.6	414.1	1.022
0.196	500.1	411.6	426.5	414.2	1.022
0.199	500.7	412.3	426.6	414.2	1.022
0.205	500.7	411.7	426.6	414.4	1.022
0.205	500.3	411.4	426.1	414.6	1.024
0.207	499.6	412.0	426.1	413.4	1.021
0.215	500.4	411.2	426.1	414.2	1.023
0.218	500.1	410.8	426.1	414.4	1.024
0.226	499.5	410.7	425.9	413.7	1.022
0.231	499.6	410.6	425.7	413.8	1.023
0.232	500.1	411.3	425.8	415.0	1.026
0.239	500.1	410.2	425.6	413.5	1.023
0.245	500.3	410.1	425.3	413.7	1.024
0.254	499.5	410.2	425.5	415.1	1.027
0.257	499.7	411.2	425.1	414.8	1.027
0.261	499.4	410.7	425.2	414.5	1.026
0.268	499.4	410.5	424.9	414.5	1.027
0.276	498.6	410.3	424.9	414.5	1.027
0.283	499.4	411.0	424.7	415.0	1.029
0.285	499.4	410.0	424.7	414.9	1.028
0.285	498.8	409.7	424.7	415.1	1.029
0.286	499.2	409.9	424.5	414.5	1.028



## TOTAL TEMPERATURE SURVEYS

NSGA= 10  
X =7.60  
Z =1.480

TSTAG=463.6  
TWALL=518.3  
TGEN =470.1

RUN =2190  
TEST= 1

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.011	522.0	489.1	470.5	455.0	1.018
0.011	521.9	489.8	470.4	455.6	1.019
0.011	520.9	487.6	470.3	454.9	1.018
0.012	521.2	487.4	469.5	454.3	1.019
0.014	521.5	486.7	470.1	454.3	1.017
0.015	521.5	486.1	469.2	453.5	1.017
0.016	521.0	484.7	469.5	453.7	1.017
0.020	520.7	485.2	468.9	453.6	1.018
0.021	520.7	483.8	468.8	453.3	1.018
0.020	520.7	483.3	468.6	452.7	1.017
0.025	520.7	482.8	468.1	452.4	1.017
0.026	520.3	481.7	468.4	452.1	1.016
0.027	520.9	480.8	467.7	449.5	1.012
0.030	520.7	480.4	467.6	447.7	1.008
0.030	519.4	479.8	467.8	442.0	0.995
0.029	520.2	479.4	467.6	439.2	0.989
0.032	520.4	478.2	466.9	438.7	0.989
0.033	519.4	477.7	467.1	439.2	0.990
0.033	520.2	477.4	466.8	438.3	0.988
0.039	519.8	476.6	466.4	438.4	0.989
0.040	519.9	476.9	466.6	438.0	0.988
0.038	519.7	475.4	466.3	437.8	0.988
0.041	518.8	474.6	466.3	437.5	0.988
0.045	519.7	474.3	466.0	437.7	0.989
0.045	519.4	473.8	465.4	437.1	0.988
0.049	519.2	474.1	465.7	436.9	0.988
0.049	519.3	473.2	465.3	435.9	0.986
0.052	518.9	472.5	465.2	435.4	0.985
0.056	519.6	471.8	465.7	435.1	0.984
0.056	518.8	471.6	464.6	435.0	0.986
0.060	518.7	471.6	464.6	435.7	0.987
0.058	519.1	470.9	464.2	435.4	0.987
0.062	518.7	469.8	463.9	435.3	0.988
0.065	518.9	470.1	464.2	436.0	0.989
0.067	518.5	469.4	464.0	435.8	0.989
0.070	518.0	469.2	463.3	436.0	0.991
0.068	518.8	468.8	463.6	436.4	0.991
0.074	518.7	467.8	463.2	435.9	0.991
0.075	517.7	467.1	463.0	436.8	0.993
0.080	517.8	467.2	463.1	436.7	0.993
0.085	516.8	467.2	462.3	436.4	0.994
0.088	517.9	466.3	462.7	437.2	0.995
0.093	517.4	465.7	462.7	437.5	0.995
0.100	517.6	465.8	462.1	438.0	0.998

## TOTAL TEMPERATURE SURVEYS

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.108	517.7	465.4	462.3	438.8	0.999
0.114	517.1	465.4	462.0	438.3	0.999
0.121	517.8	464.6	461.6	437.5	0.998
0.127	517.8	464.0	461.3	437.0	0.997
0.135	516.2	464.3	461.4	436.4	0.996
0.143	516.9	463.6	461.1	435.9	0.995
0.151	516.2	463.2	460.8	436.2	0.996
0.157	517.3	463.5	460.9	435.7	0.995
0.162	517.1	462.4	460.6	435.4	0.995
0.171	516.5	462.1	460.6	435.3	0.995
0.177	517.1	462.2	460.6	435.6	0.995
0.183	516.2	461.4	460.0	435.2	0.996
0.188	517.0	461.9	460.0	435.2	0.996
0.194	516.6	460.4	459.8	435.3	0.997
0.202	516.2	460.8	459.6	435.6	0.998
0.209	516.8	460.3	459.7	435.4	0.997
0.216	514.9	460.0	459.3	435.4	0.998
0.223	516.7	459.5	459.1	434.8	0.997
0.230	515.7	458.8	459.0	435.3	0.998
0.237	516.0	458.5	458.8	434.9	0.998
0.245	516.1	458.6	458.7	434.8	0.998
0.252	515.3	458.4	458.6	434.5	0.997
0.259	516.2	458.1	458.6	434.3	0.997
0.267	515.6	457.2	458.1	434.4	0.998
0.276	515.3	457.6	458.1	434.2	0.998
0.284	515.8	457.2	457.6	434.5	0.999
0.286	515.0	456.6	457.6	434.2	0.999
0.284	515.8	456.4	457.5	433.9	0.998
0.284	515.2	455.7	457.0	434.0	1.000
0.285	514.8	455.8	457.5	434.1	0.999



## TOTAL TEMPERATURE SURVEYS

NSGA= 10

X =7.60

Z =0.880

TSTAG=454.2

TWALL=513.6

TGEN =449.9

RUN =2190

TEST= 2

YG	TWALL	TGEN	TSTAG	TPROBE	TT RAP
0.011	516.9	459.7	458.9	438.3	1.005
0.015	515.0	459.2	458.5	437.4	1.004
0.016	516.1	458.9	458.2	437.4	1.005
0.017	516.2	458.6	458.2	436.6	1.003
0.021	516.2	458.1	458.2	436.6	1.003
0.021	515.9	457.2	457.6	435.0	1.000
0.022	516.2	457.1	457.7	435.6	1.002
0.023	516.1	456.4	457.5	435.0	1.001
0.026	515.5	456.4	457.2	434.2	1.000
0.027	516.0	455.8	457.2	433.4	0.998
0.029	515.4	455.4	457.1	431.2	0.993
0.030	515.1	454.7	456.8	425.7	0.981
0.036	515.2	454.3	456.8	424.7	0.978
0.037	514.1	454.1	456.5	426.0	0.982
0.041	514.6	454.0	456.3	425.6	0.982
0.042	515.2	453.6	456.4	426.2	0.983
0.042	515.2	453.0	455.9	426.6	0.985
0.047	514.6	452.8	456.0	425.4	0.982
0.048	515.0	452.6	455.5	425.8	0.984
0.051	513.6	452.1	455.7	425.0	0.982
0.054	514.3	451.9	455.5	425.1	0.982
0.052	514.5	451.6	455.3	425.4	0.983
0.053	514.4	451.0	455.2	425.7	0.984
0.061	514.3	450.9	455.0	425.6	0.985
0.062	514.0	450.8	454.8	426.5	0.987
0.065	513.0	450.5	454.6	426.4	0.987
0.068	513.9	450.1	454.6	426.9	0.989
0.072	513.4	449.5	454.4	427.2	0.990
0.073	513.8	449.1	454.4	428.0	0.992
0.078	513.7	448.9	454.0	427.9	0.992
0.078	513.6	448.8	454.2	428.5	0.993
0.086	513.1	449.2	453.9	428.2	0.993
0.092	513.8	448.5	454.0	429.7	0.996
0.100	513.1	447.7	453.7	430.7	0.999
0.110	513.4	448.2	453.7	430.7	0.999
0.119	513.3	448.0	453.5	430.3	0.999
0.121	512.6	447.5	453.0	429.8	0.999
0.129	513.2	447.0	453.1	429.5	0.998
0.136	512.5	446.9	452.9	428.6	0.996
0.145	512.6	446.7	452.5	428.9	0.998
0.151	512.8	446.8	452.6	428.5	0.996
0.155	512.0	446.3	452.6	428.5	0.996
0.164	512.5	446.6	452.1	428.3	0.997
0.171	512.8	445.8	452.2	428.5	0.997

## TOTAL TEMPERATURE SURVEYS

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.179	512.3	445.3	452.2	428.6	0.998
0.188	512.6	445.6	451.8	428.3	0.998
0.198	512.1	445.3	451.9	428.4	0.998
0.206	511.6	445.2	451.7	428.4	0.998
0.212	512.3	445.4	451.7	428.2	0.998
0.220	511.9	444.1	451.4	427.9	0.998
0.230	511.8	444.4	451.4	427.8	0.998
0.239	512.3	444.4	451.2	427.5	0.997
0.248	511.0	443.6	451.2	427.5	0.997
0.256	511.9	444.3	451.0	427.2	0.997
0.265	511.2	443.3	450.8	427.5	0.998
0.275	511.4	443.5	450.8	427.1	0.997
0.285	511.6	443.4	450.7	426.9	0.997
0.285	510.4	442.9	450.5	427.0	0.998
0.284	511.4	443.4	450.2	427.0	0.998
0.283	511.4	442.5	450.2	427.0	0.998
0.284	510.9	442.1	449.8	426.8	0.999



## TOTAL TEMPERATURE SURVEYS

NSGA= 10

X =7.60

Z =0.880

TSTAG=436.2

TWALL=489.5

TGEN =418.7

RUN =2190

TEST= 7

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.011	491.7	422.0	439.3	408.1	0.978
0.011	492.2	421.9	439.2	407.9	0.978
0.013	491.9	421.7	439.2	407.7	0.977
0.012	491.6	421.7	439.1	408.0	0.978
0.013	492.0	421.3	438.9	408.1	0.979
0.019	491.6	420.7	438.8	408.0	0.979
0.020	492.2	421.1	438.8	407.6	0.978
0.020	491.4	421.1	438.7	407.4	0.978
0.023	491.2	421.0	438.5	407.2	0.977
0.022	491.3	420.9	438.4	406.8	0.977
0.026	491.5	420.6	438.6	406.8	0.976
0.026	491.7	420.2	438.4	406.7	0.976
0.027	491.0	420.1	438.2	407.0	0.978
0.030	490.9	420.6	438.1	406.8	0.977
0.032	490.9	420.3	437.8	406.8	0.978
0.033	490.4	420.1	437.9	404.7	0.975
0.036	490.7	419.6	438.0	403.0	0.968
0.036	490.2	419.4	437.8	403.8	0.971
0.037	490.3	419.4	437.7	405.0	0.974
0.042	490.8	419.8	437.6	405.3	0.975
0.042	490.7	419.4	437.5	405.9	0.977
0.047	489.9	419.3	437.3	406.2	0.978
0.047	490.5	419.4	437.2	406.1	0.978
0.049	490.3	418.7	437.4	405.9	0.977
0.054	489.6	418.7	437.2	406.1	0.978
0.058	490.2	419.1	437.2	406.5	0.979
0.066	490.0	419.1	437.2	407.4	0.981
0.068	489.4	418.7	436.7	408.5	0.985
0.068	490.0	419.1	436.7	408.6	0.985
0.070	489.9	418.6	436.7	408.8	0.985
0.072	489.9	418.2	436.5	409.8	0.988
0.078	489.6	418.5	436.5	409.4	0.987
0.078	489.9	418.7	436.6	410.3	0.989
0.086	488.7	418.2	436.3	410.3	0.990
0.087	489.1	418.4	436.1	411.1	0.992
0.092	489.8	418.0	436.0	411.4	0.993
0.094	489.4	417.7	435.7	412.3	0.996
0.102	489.2	417.9	435.7	412.7	0.997
0.104	489.1	418.0	435.8	413.2	0.998
0.112	489.1	417.6	435.4	413.2	0.999
0.115	489.0	420.4	435.5	413.0	0.998
0.120	489.1	417.6	435.7	412.7	0.997
0.127	489.0	417.2	435.4	412.5	0.997
0.136	489.2	417.6	435.2	412.2	0.997

## TOTAL TEMPERATURE SURVEYS

YG	TWALL	TGFN	TSTAG	TPROBE	TT BAR
0.143	488.8	417.7	435.3	412.1	0.996
0.145	488.8	417.5	435.2	412.0	0.997
0.153	488.8	418.0	434.9	411.6	0.996
0.160	488.9	417.4	434.8	411.4	0.996
0.167	488.0	417.0	434.7	411.6	0.997
0.175	488.0	417.5	434.8	411.5	0.996
0.183	487.8	417.2	434.5	411.5	0.997
0.191	487.4	417.2	434.3	411.4	0.997
0.198	487.6	417.9	434.3	411.4	0.997
0.204	487.9	416.9	434.5	410.9	0.996
0.213	487.5	416.8	434.0	411.4	0.996
0.221	487.9	417.2	433.9	411.5	0.996
0.230	487.8	417.0	433.9	411.3	0.998
0.238	486.9	417.2	433.6	411.1	0.996
0.245	487.6	417.7	433.7	411.4	0.996
0.252	487.8	416.7	433.7	411.3	0.996
0.261	487.6	416.8	433.3	411.0	0.999
0.270	487.7	417.2	433.5	410.8	0.996
0.277	487.2	416.9	433.3	411.0	0.996
0.285	486.6	417.1	433.0	410.6	0.998
0.284	487.4	416.9	433.0	410.7	0.998
0.283	487.5	416.2	433.0	410.6	0.996
0.284	486.9	416.4	432.8	409.9	0.997



## TOTAL TEMPERATURE SURVEYS

NSGA= 10  
X =7.60  
Z =0.280

TSTAG=445.6  
TWALL=507.3  
TGEN =434.6

RUIN =2190  
TEST= 3

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.009	509.6	440.5	449.4	432.8	1.014
0.016	510.0	440.3	449.3	432.6	1.014
0.016	510.1	440.9	449.3	432.0	1.012
0.016	509.9	440.2	449.2	431.9	1.012
0.019	508.1	439.9	448.9	431.5	1.012
0.018	509.9	440.1	448.8	430.8	1.010
0.017	509.9	439.2	448.8	430.1	1.009
0.018	509.7	438.9	448.5	429.4	1.008
0.019	509.9	438.9	448.4	429.1	1.007
0.021	509.3	439.2	448.5	425.7	0.999
0.023	508.7	438.7	448.1	424.0	0.996
0.026	509.5	438.3	448.2	423.7	0.995
0.025	509.4	437.9	448.1	423.4	0.995
0.030	509.2	437.4	447.7	423.3	0.995
0.030	509.3	437.2	447.8	420.5	0.989
0.035	508.8	437.1	447.6	416.9	0.980
0.035	508.6	437.4	447.4	416.6	0.980
0.038	509.1	437.0	447.3	416.3	0.980
0.038	508.4	436.3	447.2	416.8	0.981
0.044	508.1	436.5	447.1	416.8	0.981
0.045	508.1	436.5	447.1	417.3	0.983
0.051	507.8	435.9	447.1	417.2	0.982
0.051	508.0	436.2	446.9	416.5	0.981
0.053	508.2	435.6	446.8	416.9	0.982
0.053	507.5	435.1	446.5	416.9	0.983
0.060	507.8	435.3	446.4	416.7	0.983
0.061	508.0	435.2	446.6	416.4	0.982
0.067	507.1	434.9	446.0	417.4	0.985
0.067	507.4	435.0	445.8	417.8	0.986
0.074	507.5	434.5	446.2	418.4	0.987
0.074	506.9	433.9	445.8	419.2	0.990
0.078	507.5	434.1	445.7	419.2	0.990
0.082	507.4	434.0	445.8	420.2	0.992
0.085	506.4	434.4	445.4	420.5	0.994
0.087	507.2	433.8	445.2	420.8	0.995
0.091	507.0	433.2	445.1	420.9	0.995
0.094	507.3	433.1	445.1	421.7	0.997
0.101	507.1	433.3	445.2	422.4	0.999
0.103	506.4	433.0	444.9	422.5	1.000
0.107	506.9	432.6	444.7	422.8	1.001
0.108	506.6	432.5	444.6	423.4	1.002
0.114	505.8	432.5	444.3	422.8	1.002
0.118	506.6	432.6	444.2	423.2	1.003
0.126	506.3	432.3	444.3	423.0	1.002

## TOTAL TEMPERATURE SURVEYS

YG	TWALL	TGEN	TSTAG	T PRNBE	TT BAR
0.134	505.8	432.3	444.1	422.7	1.002
0.141	506.4	432.1	443.9	421.9	1.000
0.148	506.3	431.6	444.0	421.8	1.000
0.157	506.0	432.0	443.8	421.6	1.000
0.165	506.2	431.8	443.9	422.1	1.001
0.172	505.7	431.3	443.5	421.9	1.001
0.179	506.1	432.0	443.4	421.7	1.001
0.187	505.8	431.2	443.5	422.1	1.002
0.195	505.8	431.2	443.2	422.0	1.002
0.205	505.6	431.3	443.2	421.7	1.002
0.213	505.2	431.1	443.1	421.9	1.002
0.222	505.2	431.3	442.9	421.8	1.002
0.230	505.7	431.0	442.8	421.7	1.003
0.239	505.2	430.4	442.6	421.9	1.003
0.249	505.5	430.7	442.7	422.7	1.005
0.258	504.7	430.6	442.4	421.8	1.004
0.267	504.2	430.8	442.2	422.4	1.006
0.273	505.1	430.6	442.5	422.3	1.005
0.282	504.4	430.0	442.1	421.9	1.004
0.284	504.6	430.5	442.1	421.8	1.004
0.285	504.8	430.5	442.1	422.8	1.007
0.285	503.5	429.7	442.0	422.8	1.007



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TOTAL TEMPERATURE SURVEYS

NSGA= 10  
X =7.60  
Z =0.080

TSTAG=442.5  
TWALL=502.6  
TGEN =428.9

RIIN =2190  
TEST= 4

Y6	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.009	505.1	432.3	445.2	429.5	1.015
0.014	505.0	432.4	445.4	429.1	1.014
0.016	505.0	432.6	445.2	428.9	1.014
0.018	504.7	432.4	444.9	428.6	1.014
0.018	505.1	432.1	444.1	428.3	1.015
0.019	505.1	432.4	444.4	428.2	1.014
0.023	504.5	431.8	444.7	428.0	1.013
0.027	504.5	431.4	444.7	427.7	1.012
0.030	504.4	431.5	444.7	427.4	1.012
0.032	504.2	431.2	444.7	424.2	1.004
0.036	503.6	431.1	444.4	423.9	1.004
0.039	504.3	431.4	444.5	424.4	1.005
0.042	503.9	430.6	444.2	425.0	1.007
0.044	503.9	430.2	443.6	425.4	1.010
0.048	504.2	430.5	443.7	424.8	1.008
0.053	504.0	430.2	443.4	425.0	1.009
0.057	503.6	430.4	443.0	425.5	1.011
0.058	503.4	430.3	443.9	425.2	1.008
0.061	503.5	429.9	443.8	424.5	1.007
0.065	503.1	429.5	443.6	424.1	1.007
0.068	503.7	429.8	443.5	424.0	1.006
0.072	503.6	429.7	443.7	423.9	1.006
0.077	502.8	429.4	443.2	424.4	1.008
0.080	503.3	429.9	443.2	424.3	1.008
0.082	503.3	429.1	443.1	424.7	1.009
0.086	502.5	428.7	443.0	425.0	1.010
0.093	502.8	429.0	443.0	424.8	1.009
0.098	502.7	429.1	443.2	425.5	1.011
0.101	501.6	428.8	442.6	425.5	1.012
0.106	503.7	429.3	442.6	424.3	1.009
0.110	502.6	428.4	442.9	425.0	1.010
0.114	501.9	428.3	442.4	424.9	1.011
0.118	502.4	428.5	442.5	424.5	1.010
0.124	501.9	428.1	442.2	424.5	1.010
0.129	501.8	428.3	442.0	424.8	1.012
0.131	502.4	428.3	442.0	424.5	1.011
0.138	502.4	427.8	442.0	424.7	1.012
0.146	501.2	427.6	442.0	424.5	1.011
0.155	502.0	427.5	442.0	424.5	1.011
0.163	501.7	427.6	441.7	424.1	1.011
0.171	501.5	427.8	441.4	423.9	1.011
0.176	501.7	427.6	441.5	423.7	1.010
0.184	501.6	426.9	441.5	425.0	1.013
0.192	501.2	427.1	441.5	424.9	1.013

## TOTAL TEMPERATURE SURVEYS

YG	TWALL	TGFN	TSTAG	TPROBE	TT BAR
0.200	501.7	427.4	441.3	425.4	1.015
0.209	501.0	427.0	441.1	425.0	1.014
0.216	500.7	427.7	441.0	425.4	1.015
0.224	501.3	427.0	440.9	425.7	1.016
0.232	500.9	426.4	440.8	425.7	1.017
0.241	501.4	427.1	440.7	425.4	1.016
0.249	501.3	426.8	440.8	425.9	1.017
0.257	500.2	426.7	440.5	426.5	1.019
0.264	500.8	427.6	440.3	426.0	1.018
0.265	500.8	426.3	440.5	426.4	1.019
0.270	500.0	426.2	440.2	426.3	1.019
0.279	500.6	426.9	440.1	425.8	1.018
0.287	500.5	426.4	440.1	426.0	1.019
0.287	499.9	426.3	439.8	426.9	1.022
0.286	500.5	426.4	439.8	426.5	1.021
0.285	500.4	425.7	439.5	426.2	1.021
0.286	500.1	426.2	439.7	426.1	1.020



## TOTAL TEMPERATURE SURVEYS

NSGA= 10

TSTAG=460.1

RUN =2191

X =7.60

TWALL=519.5

TEST= 1

Z =0.080

TGEN =476.8

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.012	523.2	495.6	466.9	463.9	1.046
0.012	522.7	495.2	467.5	465.1	1.047
0.015	522.4	493.8	466.4	462.5	1.044
0.020	521.3	493.1	466.7	458.3	1.034
0.024	522.1	492.2	465.9	454.3	1.026
0.027	522.1	492.3	466.5	452.5	1.021
0.030	521.4	490.9	465.5	451.9	1.022
0.036	521.5	490.3	465.4	450.4	1.019
0.036	521.6	489.7	465.2	450.5	1.019
0.039	522.1	488.9	464.8	449.6	1.018
0.045	520.8	487.7	464.8	449.7	1.019
0.047	521.4	487.2	464.2	448.1	1.016
0.052	521.5	486.5	464.6	448.2	1.016
0.057	521.4	486.3	463.7	447.5	1.016
0.057	521.4	485.2	464.1	446.6	1.013
0.062	521.0	484.7	463.3	445.9	1.013
0.066	521.2	484.5	463.6	445.4	1.011
0.067	521.5	483.5	462.8	445.0	1.012
0.074	520.5	482.6	462.5	444.3	1.011
0.079	520.9	482.2	462.8	444.7	1.011
0.083	520.9	481.9	462.1	444.1	1.012
0.090	520.1	480.9	462.3	444.7	1.013
0.093	520.1	480.9	461.5	444.2	1.013
0.101	520.4	480.5	462.2	444.6	1.013
0.108	520.9	479.3	461.0	443.0	1.012
0.115	520.2	478.8	461.5	443.9	1.013
0.118	520.5	478.4	460.9	442.7	1.011
0.125	519.9	477.7	460.6	441.7	1.010
0.125	519.9	477.8	460.8	443.2	1.012
0.131	519.7	476.9	459.8	441.9	1.011
0.139	520.0	475.4	460.6	442.3	1.011
0.149	519.8	475.4	459.7	441.9	1.012
0.158	519.8	474.8	459.9	441.4	1.010
0.166	519.4	474.6	459.4	442.1	1.013
0.175	519.3	474.6	459.2	441.9	1.013
0.183	519.5	474.2	459.0	442.6	1.015
0.191	519.2	473.3	458.6	441.4	1.013
0.200	517.8	472.2	458.7	442.1	1.015
0.210	518.4	472.2	458.0	441.9	1.015
0.219	518.9	471.9	458.4	442.5	1.016
0.228	517.6	470.9	457.7	442.0	1.017
0.237	517.8	471.3	457.6	441.9	1.016
0.246	518.9	470.3	457.9	441.8	1.016
0.255	518.5	469.8	457.4	442.8	1.019

## TOTAL TEMPERATURE SURVEYS

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.265	518.4	469.3	457.3	442.7	1.019
0.275	518.4	468.8	457.4	442.5	1.018
0.285	517.5	468.6	456.7	443.0	1.021
0.293	517.3	467.7	456.5	442.5	1.020
0.301	517.8	468.3	456.3	441.8	1.019
0.310	517.9	467.2	456.0	442.1	1.021
0.319	516.7	466.5	456.4	442.8	1.021
0.329	517.5	466.9	455.7	441.5	1.020
0.339	517.8	466.2	456.3	442.7	1.021
0.349	515.7	466.2	455.1	442.3	1.023
0.358	517.6	465.5	455.7	442.3	1.022
0.367	517.4	464.9	455.3	442.2	1.022
0.376	517.2	464.5	455.0	442.6	1.024
0.386	517.5	464.5	455.1	442.3	1.023



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TOTAL TEMPERATURE SURVEYS

NSGA= 10  
X =7.60  
Z =0.080

TSTAG=431.6  
TWALL=489.3  
TGEN =414.8

RUN =2191  
TEST= 7

YG	TWALL	TGEN	TSTAG	TPROBE	TT BAR
0.014	491.6	417.0	434.6	411.5	0.997
0.019	491.7	416.7	434.5	411.4	0.997
0.021	491.2	417.3	434.3	411.5	0.997
0.024	491.9	416.7	434.1	411.7	0.998
0.028	491.7	416.3	434.1	412.1	0.999
0.031	491.0	416.0	434.0	411.9	0.999
0.033	491.2	416.2	434.1	412.1	0.999
0.036	491.1	416.4	433.9	412.6	1.001
0.039	490.5	415.8	433.7	412.8	1.002
0.041	491.1	415.5	433.6	412.8	1.002
0.042	491.1	416.1	433.6	413.1	1.003
0.044	490.9	415.5	433.2	413.0	1.004
0.050	490.9	415.5	433.4	413.4	1.004
0.057	490.8	416.1	433.0	412.8	1.003
0.062	490.4	415.3	432.9	412.8	1.004
0.066	490.5	415.5	433.0	412.3	1.002
0.071	490.7	415.5	433.0	412.8	1.003
0.076	489.5	414.7	432.7	413.4	1.006
0.082	490.1	415.3	432.7	413.7	1.006
0.089	489.6	415.2	432.6	413.9	1.007
0.097	489.3	415.4	432.3	414.6	1.009
0.104	489.9	415.3	432.5	414.8	1.010
0.110	489.8	414.9	432.3	414.6	1.010
0.118	489.4	414.8	432.2	415.0	1.011
0.126	489.8	414.9	432.3	414.7	1.010
0.135	488.5	414.5	432.0	414.9	1.011
0.142	489.2	415.0	431.7	414.6	1.011
0.157	489.0	414.5	431.4	414.6	1.012
0.165	489.3	415.0	431.5	414.4	1.011
0.174	489.1	414.5	431.5	414.6	1.011
0.183	488.5	414.4	431.2	414.5	1.012
0.190	488.9	415.2	431.3	414.7	1.012
0.197	489.1	414.5	431.4	415.8	1.015
0.205	488.8	413.8	430.9	415.4	1.015
0.215	488.8	414.3	431.0	415.4	1.014
0.225	488.7	414.2	430.9	415.5	1.015
0.233	487.8	414.5	430.6	415.5	1.016
0.242	488.7	414.4	430.6	415.6	1.016
0.251	488.8	413.9	430.3	415.9	1.017
0.261	488.1	414.2	430.5	415.6	1.016
0.271	488.7	414.0	430.4	416.0	1.017
0.280	487.8	414.1	430.1	416.1	1.018
0.289	488.2	414.6	430.2	415.6	1.017
0.296	488.2	414.1	430.1	415.8	1.018

## TOTAL TEMPERATURE SURVEYS

YG	TWALL	TGEN	TSTAG	T PROBE	TT BAR
0.306	488.0	413.7	430.0	416.9	1.021
0.316	488.1	414.1	429.8	415.9	1.019
0.325	488.0	413.5	429.8	416.1	1.019
0.334	487.3	414.1	429.5	416.1	1.020
0.342	488.1	413.9	429.6	416.1	1.019
0.351	487.9	413.3	429.3	416.7	1.022
0.359	488.0	414.1	429.2	416.1	1.021
0.369	487.6	413.7	429.2	416.4	1.021
0.377	487.5	413.6	428.9	416.2	1.021
0.385	487.1	414.3	428.8	416.8	1.023



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